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This paper presents findings from a study of the social and economic effects of adopting individually prescribed instruction programs by elementary and secondary schools in Florida. Study procedures involved: (1) Visitation of schools, rural and urban, where IPI had been adopted experimentally, and discussion of the system with specialists in IPI; (2) comparison of IPI and current systems so that the major differences might be isolated; and (3) interviews with community leaders, heads of public agencies, specialists in education, and others in both rural and urban areas to obtain views about possible consequences of IPI on individuals and on the community at large. This report divides the subject into three main areas central to a program of IPI: (1) A continuous year-round school program, (2) differentiated staffing, and (3) individual rate of student progress. Difficulties envisioned by the communities are discussed and recommendations made. A 27-item bibliography is included. (MLF)

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FINAL REPORT

GRANT NO. OECO-8-080480-4477(010)

AN EXAMINATION OF THE SOCIO-ECONOMIC IMPLICATIONS OF THE ADOPTION OF INDIVIDUALLY PRESCRIBED INSTRUCTIONAL SYSTEMS BY SCHOOL SYSTEMS

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SUMMARY

Individualized instruction or individually prescribed instruction (IPI) as conceived for this study is defined as "an individualized program of studies tailored to each student's learning needs based on his competencies and his characteristics as a learner."*

The probable rapid adoption of Individually Prescribed Instructional (IPI) systems by elementary and secondary schools in the immediate future raises the possibility of radical changes being affected in the time structure for school attendance and correspondingly in the rate of student progress. Standard methods of instruction are designed to conform to an arbitrary time structure imposed by an arrangement of 11 or 12 discrete grades and terminal school year of 9 or 10 months. Even schools implementing a year-round educational system generally still have terminal periods such as two semesters and a summer quarter and retain the graded program. The present "grade-year" system in public education has numerous disadvantages. A system of instruction with inherent advantages greater than those of instructional systems presently in use, and that could eliminate existing difficulties, would be of great benefit to education and a service to the nation. However, the adoption of such a system could have wide social and economic implications.

A prime educational advantage of IPI is that courses of study may be designed to be continuous throughout all the years of a student's formal schooling, with no need for breaks at a particular time of work. By individualizing instruction, the school becomes an accommodating agent to the individual student, rather than vice versa. The student is accommodated by a continuous academic opportunity; he is able to proceed at a different rate of progress from his peers and to proceed at different rates of progress in different subjects.

The objectives of this study include the following:

1. to postulate possible socio-economic consequences arising from the adoption of Individually Prescribed Instruction by school systems;
2. to attempt the quantification of some of the major economic changes that might occur with the adoption of IPI;
3. to indicate some measures which should be taken in order for communities to adapt to the changes in the shortest time and for the most benefit.

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*John O. Bolvin. "Implications of the Individualization of Instruction for Curriculum and Instructional Design," Audio Visual Instruction, 13 (March 1968), pp. 238-242.

The following procedures were used in this study:

1. Schools where IPI has been adopted experimentally were visited in order to examine the system in operation and to discuss the system with the leading specialists in IPI.

2. A detailed comparison was made between IPI and currently prevailing educational systems, so that the major and critical differences might be isolated. Those changes in the existing educational structure which would be possible or required with the adoption of IPI were determined.

3. The investigators interviewed community leaders, heads of public agencies, specialists in education, and others, in both rural and urban areas to obtain views about possible consequences of the structural changes in education on individuals and on the community at large. Prior to the interviews, a brief report was prepared by the investigators, showing the probable major changes in the structure of the education system which would be possible with the adoption of IPI. This report was sent in advance to each interviewee, enabling him to give reasoned comments concerning the repercussions of the changes. The interviews were unstructured but conducted in a manner to get information related to the speciality of the person interviewed, rather than random comments.

Since there is at present no IPI system existing in its entirety, it was necessary to examine and piece together the fragmentary experiences of various experimenters in the field. It is necessary in the end to fall back on a purely speculative process in evaluating the socio-economic consequences of the adoption of such a program. One type of outcome might be that expressed in the claims, hopes, faith and aspirations of those who are developing such programs or promoting them. One can also go into the field and inquire from various interested persons what they would consider to be the consequences of introducing this system. We have taken both of these approaches.

In this report the treatment of the subject has been divided arbitrarily into three main areas which seem to be central to a program of IPI. These are: 1. A continuous year-round school program; 2. Differentiated staffing; 3. Individual rate of student progress.

Summary of Conclusions

The full and successful implementation of IPI as conceived in this study would necessitate the accommodation of (1) individual rate of student progress, (2) differentiated staffing, and (3) a continuous twelve-month school program. The legal framework permitting the adoption of these concepts exists in the state of Florida though some modifications of the laws would be required. This is probably true in other states as well.

The problems involved in the implementations of IPI would differ considerably between rural and urban school systems, due to the different economic basis of each, particularly regarding child labor, community attitudes, and resources. In the rural county investigated, the adoption of a compulsory year-round school program would be detrimental to the summer tobacco harvest because it would restrict the supply of child and juvenile labor and was generally opposed on this basis. The idea of IPI without a year-round program was received favorably, however, and it was thought that it would aid in the process of racial integration of the schools if adopted. In the urban community investigated, there were no serious objections, economic or otherwise, to a year-round school program. In both the rural and urban communities, however, there was considerable concern with the "permissiveness" of IPI.

With a continuous year-round program, IPI would be instrumental in eliminating the influx of students and high school graduates onto the labor market each summer by spreading the graduation dates throughout the year and providing students with the opportunity to seek work when it was available.

IPI would provide almost ideal conditions for vocational education and would eliminate most of the problems of the school to work transfer. At the same time, it might have the undesirable effect of over-specialization of workers, leading to their inability to adjust to changing conditions.

With a continuous twelve-month school program, two years could be saved from the present K-12 elementary-secondary school program. This would open up many possibilities for a broadened curriculum, more advanced work in high school, earlier college entrance age, or more specialization in vocational education. It would also require some difficult decisions by the public and school authorities.

Starting at an early age, the built-in process of self direction required by IPI might produce a more self directed and independent society. Theoretically, IPI would eliminate or greatly reduce student failure, thereby reducing one serious source of young people's frustrations and the resulting social problems. There is also evidence that the school drop-out rate would be reduced considerably, and many economic and social advantages would accrue from this.

Difficulties to be Encountered in Implementing IPI

A public that is apprehensive that IPI is an overly-permissive program lacking sufficient direction and guidance for students will make adoption of IPI difficult in some areas.

Most public school systems are not at present prepared to undertake the coordinated planning of teaching strategies, curriculum organization, and facilities necessary for the adoption of major educational innovations such as IPI.

Probably the greatest obstacles to the adoption of IPI are the lack of qualified teachers and of in-service training programs to prepare present teachers to undertake new roles.

Instructional materials suitable for IPI are not currently available, and the publishing industry is not prepared to supply these materials in the immediate future.

Recommendations

Attempts should be made to design educational organizations with built-in innovating forces that will insure planning to meet the future requirements of education. Today there is long-term fiscal planning to deal with such matters as building programs, but there is as yet little coordinated planning for innovation in the instructional program.

Public education is increasingly becoming an "open system," with all groups in the community involved, but the formal means of integrating these various interests through an educational program designed to provide for their needs is still lacking. One of the difficulties in the implementation of IPI is the lack of communication between the various interested groups in the community. Such communication difficulties preclude any coordinated long-range educational program such as IPI. One means of overcoming the short-sightedness which lack of communication produces on the local level might be to conduct national and regional conferences involving participants from various areas of activity such as education, business, social welfare, labor, public safety, and recreation. The purpose of such a conference would be to consider the socio-economic implications of such innovations as IPI and a year-round school program.

INTRODUCTION

Individualized instruction or individually prescribed instruction (IPI) as conceived for this study is clearly defined as "an individualized program of studies tailored to each student's learning needs based on his competencies and his characteristics as a learner."[1]

The probable rapid adoption of Individually Prescribed Instructional (IPI) systems by elementary and secondary schools in the immediate future raises the possibility of radical changes being effected in the time structure for school attendance and correspondingly in the rate of student progress. Standard methods of instruction are designed to conform to an arbitrary time structure imposed by an arrangement of 11 or 12 discrete grades and a terminal school year of 9 or 10 months. Even schools implementing a year-round educational system generally still have terminal periods such as two semesters and a summer quarter and retain the graded program. The present "grade-year" system in public education has numerous disadvantages, including:

A. The summer vacation which creates:

   1. the need for special recreational programs for pupils out of school;
   2. problems of child care for working mothers;
   3. the need to provide part-time employment for large numbers of students for a short time;
   4. special problems of civic order caused by idle and bored youth;
   5. the concentration of family vacationing in a two- or three-month period;
   6. the under-utilization of educational facilities;
   7. a discontinuity in studies;
   8. loss of pupil educational time.

B. The terminal school grade-year which:

   1. increases the time necessary for the completion of any level of studies;
   2. retards progress of academically talented students;

3. places unhealthy pressure on academically slow students;

4. requires a similar rate of progress in all subjects.

C. Methods of instruction which:

1. inhibit teacher subject-matter specialization, particularly at the elementary school level;

2. permit wide differentiation in the quality of instruction;

3. require more than available teacher-pupil time expenditure for best educational results.

Other disadvantages of the present grade-year system could be noted but those listed above illustrate the nature of serious educational defects and auxiliary social problems. A system of instruction with inherent advantages greater than those of instructional systems presently in use, and one that could also eliminate the listed difficulties, would be of great benefit to education and a service to the nation. However, the adoption of such a system would have wide social and economic implications.

A prime educational advantage of IPI is that courses of study may be designed to be continuous throughout all the years of a student's formal schooling with no need for breaks at a particular time of the year. The school accommodates the individual student, rather than vice-versa, by permitting him to progress at his own rate in the various subjects. The socio-economic implications of such systems are the subject of this report.

The educational advantages of IPI are not evaluated here. For purposes of this study it is assumed that IPI is a superior method of instruction.

SECTION ONE:

Procedures

The investigators used the following procedures in the conduct of this study.

1. They visited schools where IPI has been adopted experimentally in order to examine the system in operation and to discuss the system with the leading specialists in IPI.

2. A detailed comparison between IPI and currently prevailing educational systems isolated the major and critical differences and identified those changes in the existing educational structure which would be possible or required with the adoption of IPI.

3. The investigators interviewed community leaders, heads of public agencies, specialists in education, and others in both rural and urban areas to obtain views about possible consequences of the structural changes in education for individuals and the community at large. A brief report was prepared by the investigators showing the probable major changes which would be possible with the adoption of IPI. This was sent in advance to each interviewee, enabling him to give reasoned comments concerning the repercussions of the changes. The interviews were unstructured but conducted in a manner to get information related to the speciality of the person interviewed rather than random comments.

4. The following interviews were planned to determine the possible results of changes on community programs, the family, industry and business, the tourist trade, labor market, and education. Additional interviews were added to particular categories as the researchers deemed them appropriate.

Categories Affected	Interviewee (in City of Jacksonville, Florida and County of Gadsden, unless otherwise designated)
I. Community Programs	
A. Recreation	Public recreation officials and recreation directors of 3 schools in Jacksonville
B. Civic Order	Appropriate police officials; 3 or 4 social welfare workers

II. Family Group	
A. Vacationing	2 family counselors
B. Child Care	3 or 4 social welfare workers
III. Industry and Business	
A. Scheduling of Vacations	5 production and/or personnel managers in large factories or commercial companies (Jacksonville)
B. Absenteeism	Same as for scheduling vacations
IV. Tourist Trade	
A. Employment	Managers of 3 large tourist agencies
B. Facilities	Head of the Florida Association of Hotel Managers; Head of the Department of Hotel and Restaurant Management, Florida State University
V. Labor Market	
A. Part-time Employment	Appropriate State Employment Service officials at the state and local levels
B. Influx of Graduating Students	Same as for part-time employment; Community Relations Coordinator, Youth Opportunity Center (Jacksonville)
C. Agricultural Work	County agricultural agent, FHA advisors

VI. Education

A.	Teachers Salaries and School Budgets	County Superintendent of Schools and Assoc. Super. of Business Affairs
B.	Student Transfer from School to School	Director of Pupil Personnel - state and local levels; Director of Federal and State Relations, State Dept. of Education; County Boards of Public Instruction
C.	Rate of Student Progress	Associate Super. for Instruction; state and local levels
D.	State-Local Fiscal System	Associate State Super., Division of Finance; Chairmen of State House and Senate Education Committees; Chairman of Legislative Tax Committees
E.	Standardization of Instruction	Associate State Super. for Instruction
F.	Standardization of Instructional Materials and Tests	Director of Research, State Dept. of Education
G.	University and College Entrance	Chancellor of the State Board of Regents; Head of the State Assoc. of College Registrars
H.	Computer-Managed Instruction	State Assoc. Super. of Systems Development; Director of the Computer Aided Instruction Center, Fla. State Univ.; Computer Manufacturing Representatives (IBM; Remington)

5. The final report was prepared. By its nature, this study is highly speculative as the actual conditions to be studied do not in fact exist.

The collection of information was not based on a statistical sampling design and no systematic statistical procedures were indicated. Any quantitative estimates are based on assumptions about the range of potential changes.

This study has followed the original proposal. Deviations from the proposed program have not been substantive in any instance.

If one wishes to investigate the consequences of an IPI educational system, as we have done here, he is immediately faced with the fact that there is at present no such system existing in its entirety. Thus one is required to examine and piece together the fragmentary experiences of various experimenters in the field. It is necessary in the end to fall back on a purely speculative process in evaluating the socio-economic implications of the adoption of such a program. One type of outcome might be that expressed in the claims, hopes, faith and aspirations of those who are developing such programs or promoting them. One can also go into the field and inquire from various interested persons what they would consider to be the consequences of introducing this system. We have taken both of these approaches.

In this report we have arbitrarily divided the treatment of the subject into three main subject areas which seem to be central to a program of IPI. These are: 1. A continuous year-round school program; 2. Differentiated staffing; 3. Individual rate of student progress.

SECTION TWO:

Background - Description and Preliminary Speculations

This section of the report consists of background material, giving descriptions of continuous year-round school programs, differentiated staffing, and individual rate of student progress, and some speculations on the effects that might be expected from the adoption of each in public school systems.

These speculations were made on the basis of school visitations, talks with specialists in IPI, and studies of the available literature on the subject, all prior to interviews in Florida. These speculations may differ from the findings of the study and could possibly be left out. However, they were valuable in helping the investigators to understand what followed in the study and are included in this section to help orient the reader to the material that follows.

I. The Continuous Year-Round School Program

The year-round program is not a new concept, but there is considerable difference between the idea of a year-round school program as has been conceived in the past, and as conceived for the program of Individually Prescribed Instruction, in which the student proceeds at his own pace.

Clarence A. Schoenfield and Neil Schmitz in their book, Year-Round Education, state that "Today, with American educators seemingly caught between the upper and nether millstones of vastly increasing student needs and relatively decreasing school resources, more and more professional and lay school men have turned to a consideration of the all-year elementary and secondary school as a possible means of adjusting supply to demand."[2]

It should be noted that the emphasis here is on increased utilization of the school facility rather than on accomodating the student with a better educational program.

Schoenfield and Schmitz define a year-round school as "all those programs which aim at a year-round operation of the school plant which retain at least some faculty on the twelve-month basis."[3]

Four principal patterns can be distinguished for year-round programs--the quarter system, the extended semester, the extended summer session, and the continuous process plan. The quarter system has two types of plans. One is a four-quarter staggered vacation school year in which 25 percent of the students are on vacation each quarter. Under this program the student gains nothing from the year-round school program as he only attends three quarters of the year as under standard programs. The other plan under the quarter system is a four-quarter program, in which the students attend all 48 weeks of the school year. Under both programs the school facility is utilized on a twelve-month basis. The staggered quarter plan is advocated almost entirely for the purpose of utilizing school facilities to a greater extent. Experiences have shown, though, that in some instances the cost of operation was greater with the extended school year. The consecutive quarter, 48-week school year permits the students to accelerate their program if they wish by studying the year-round, but still the main purpose of the program is the greater utilization of the facilities. Experiments with both of the quarter programs was discontinued during the depression years of the 1930's on the basis of cost.

The extended summer session system, like the four-quarter system, places the school on a year-round basis of operation. The objective of this program, though, is not necessarily reduction of cost. Apparently the main purpose of the summer program is to prevent a loss of learning during the summer break, provide enrichment or remedial experiences, and, to some extend, provide for acceleration of study.

These programs are usually voluntary on the part of the students. The extended semester system is a school program typically with a 210-day school year, extending the conventional school year into the middle of July. Under this program the teachers have been employed on a twelve month basis, and the students have an eight-weeks' vacation period. None of these programs seems to provide a satisfactory basis for acceleration in the elementary schools, however, since the class groupings are retained.

Under these circumstances all subjects are taught to all students throughout a particular grade. It is difficult for any one student to advance beyond the others in the group simply by studying in the summer time or under a four-quarter system. In a high school where the student is not necessarily tied to a particular class but rather to subjects on a vertical basis it is possible for him to accelerate in individual subjects to a greater extent without being held back by the progress rate of a class.

One important characteristic of these programs should be noted--they all have discrete periods such as the quarter, semester, etc. This means that there is no real continuity in the process of instruction and that the student can only proceed by these artificial steps rather than at his own pace.

The continuous year-round school program is a necessary counterpart to IPI if the objective of individual rate of student progress is to be attained to the fullest extent. Any artificial breaks in the school year as occur in the year-round programs described above obviously interfere with a student's progress. If the student is to be free to progress at his own pace, then the facilities for study must be available to him at any time of the year, and he should not be required to progress in stages of quarters, semesters, etc. In other words, the school facilities must be available to the student on a continuous basis every month of the year. This requires that a full staff of administrators and teachers be employed twelve months of the year and that the buildings, equipment and instructional materials be available whenever the student wishes to apply himself to his studies.

A continuous year-round school requires that instruction be on an individual basis. It is obvious that new courses of study cannot begin each day for groups of students. Courses for groups must have beginning and ending calendar dates. This is a discontinuous process. With IPI a student can take up any segment of a course for which he is prepared at any time during the year. The school program is designed to accommodate the student rather than the student having to accommodate the school program. Once the instructional program has been individualized, the school program can become continuous and, as desirable, year-round.

The traditional school year of 8, 9, or 10 months is not a requirement for an IPI program nor for traditional methods of instruction. The summer break may have been a convenience in a predominantly agricultural society, but today, for many, it seems more of an unnecessary nuisance.

Under the traditional system of instruction a year-round continuous school program is impractical for the following reasons.[4]

1. Teachers need or require a vacation. If there is no psychological need, they require time for study. If they do not study, they have still acquired with other workers in our society the right to an annual vacation. Under the traditional system of education the break can best be given for all teachers at the same time. This means a terminal school year.

2. Most pupils need a break in the regular routine of study. This may be questioned but would seem desirable if it is thought healthy for others to take a break in their work. Even if the student does not need the break, the parents usually want theirs, and few have the possibility of leaving their children in school while they vacation alone. The traditional system of instruction requires that such a break, for whatever reason, be taken by all children in a school system at the same time. The termination of the school year seems best for this purpose.

The above impracticalities for a year-round school program become less crucial with IPI and some are eliminated altogether. The possible effects of IPI in specific areas of activity are given below, in outline form, and some questions are raised. These possibilities are hypothesized on the basis of the nature of IPI.

A. Community Programs:

1. Recreation programs - Summer recreational programs currently provided by municipalities could be run as part of the regular school program as winter recreation programs are.

    a. Schools could extend their programs to include most programs now provided separately by municipalities during the summer months.

    b. Separate facilities would not be required as at present for municipal and school programs.

    c. What is the cost of such programs today? What could be saved? Are there non-fiscal benefits?

2. Civil order - If the majority of the children and youths were in school the year-round, one source of civil disorder would be removed.

    a. There would not be large groups of idle youth on the streets for long periods of time during the summer.

    b. What is the present cost of programs designed primarily to deal with this problem? Police; recreation; jobs; others. Could the cost of such programs be better used for a year-round educational program?

B. Labor Market:

The large summer influx of students and high school graduates onto the labor market would be stopped.

1. As students could progress at their own pace, they would be expected to graduate at different times during the year as each completes the required work. One might expect graduation or completion dates to be distributed more or less randomly throughout the year. Graduating students could be expected to enter the labor market in much the same random order rather than in June as at present.

2. Enrolled students seeking part-time work or full-time work for short periods would not be forced as now to seek work primarily during the summer months. They could look for work when most convenient for themselves or when employment opportunities are greatest.

C. Family Group:

1. Vacations - The summer school-break forces the concentration of family vacations in the summer months. With IPI there will be no need for the vacation to be taken during the summer unless it is so desired.

2. Child care - The need for working mothers to arrange special care for their dependent children during the summer months would be eliminated.

D. Industry and Business:

1. Scheduling of vacations - IPI would reduce the necessity of concentrating vacations in one part of the year. If students and, therefore, the parents can take vacations at any time of the year, then there is no need to limit the time for vacations to the summer months.

2. Absenteeism - There should be a tendency toward the reduction of absenteeism, particularly for working mothers, if there is no long school break during the summer.

3. Availability of youth for seasonal work - IPI would tend to reduce the availability of youth for work during the summer months but would permit greater availability of such workers during other months of the year.

E. Tourist Trade:

Tourist Trade:

1. Employment - The heavy concentration of employment during the summer months would be avoided due to the change in patterns of family vacationing noted above. Employment might be distributed more evenly throughout the year.

2. Facilities - Tourists could be accommodated with fewer facilities by the elimination of the summer peak vacation period.

F. Education:

1. Compulsory education

   a. Compulsory 12 years of schooling could be maintained, with the additional 2 months annually. Added time could be used for enrichment, or junior college-university parallel programs, or for technical programs.

   b. Material in the conventional K-12 program could be completed in 10 years.[5] A school-leaving age of two years less than in 1968 suggests necessary changes in compulsory education laws. Is there any legislation providing minimum age required for university entrance? Could 14 year olds be sent away from home to university? Is a university campus a suitable place for this age student?

2. State and local fiscal policies would be modified to permit lengthening of the school year to 12 months. Would 12 month schooling be a local or state decision? Which level of government or would local and state governments jointly finance additional schooling?

3. In-service training--IPI would eliminate concentration of in-service activity in summer months. In-service training is provided on a year-round or continuous basis. The teacher might take a break to enter a university, etc., or in-service training might be an integrated part of the instructional program. Under present arrangements universities (particularly colleges of education) concentrate on teacher in-service programs in summer months. The possibility exists of emphasis on continuing education to provide in-service training "in the field."

4. Building maintenance--Ordinarily, major maintenance is accomplished in summer months--Possible interference with educational program of year-round school.

5. School budget:

   a. Teachers' salaries - Extended by two months, with paid vacation of one month.

   b. Teacher substitutes' salaries - Extended to cover vacation time of regular teachers and because of the added length of the school year.

   c. Administrators' salaries - Little effect, as they are employed already on a 12-month basis.

   d. Clerical salaries - Same as for teachers

   e. Facilities utilization -

      (1) Air conditioning (required in most parts of the country during summer)

      (2) Added three-months amortization on facilities

(3) Added educational service (12-months' use instead of 9-10 months)

(4) Changed per student fixed overhead (?)

    (a) Larger student load? Can more students be accommodated?

    (b) Larger student turnover rate (?) (completion in 10 years instead of present rate of progress for all students)

        (i) Even if the rate of learning does not increase, with additional average 2 months of school per year and continuous progress, two years will be saved.[6] Possibilities:

            (ia) Added load with 12 years at present levels of subject matter (more subjects, perhaps)

            (ib) Extended program through junior college level instruction is possible

II. Differentiated Staffing

The best publicized model of a differentiated staffing plan is that of the Temple City Unified School District in California. This plan appears in a proposal to the Charles F. Kettering Foundation, January, 1968. It not only provides for a differentiated teaching staff for each subject area but also for a highly qualified differentiated professional staff for curriculum research and development. Parts of this proposal are paraphrased below.[7]

Rationale of the Temple City Plan

The Temple City Plan of a differentiated teaching staff envisions a complete reorganization of the school district, the development of advanced teacher roles within the system, and the formalization of the "self-renewing" concept of institutional change for maintenance of organizational health and vitality. A seven-level hierarchy of professional-paraprofessional roles has been described as a part of the restructuring process. Briefly, they are as follows:

Teaching Curriculum-Research Associate

Senior Teacher-Learning Engineer

Staff Teacher

Associate Teacher

Academic Assistant

Educational Technician

Clerk

The effective utilization of new roles necessitates new time-space modalities within the schools and different coordinating bodies to effectively relate the roles for successful institutional transition. For this reason, the rationale for the Temple City Plan depends upon modular-flexible scheduling as an integral aspect of successful implementation.

In re-structuring of the school system, new models of staff differentiation require a different base of support, i.e., a new logistical priority, and expansion of the instructional support systems such as materials, media, and facilities must be undertaken.

After the organizational changes have been effected and the support systems realized, a process of on-going staff in-service training must help teachers grow into the new roles. Few teachers possess the backgrounds of technical competence and breadth of knowledge associated with the new "self-renewal" staff units in the Temple City Plan. For this reason, advanced training is a prerequisite for success in the implementation period. For much of the training to be relevant and applicable, the new structure must first be created and then teachers must work toward and into the new positions required by the structure. A description of each staff level is given below.

Teaching Curriculum-Research Associate

TCRA's function in six special areas within the School District on a K-12 basis. These six TCRA's are responsible for the maintenance of subject area "self-renewal" through the analysis and application of frontier thinking and research in the classrooms of the District. The TCRA must possess the equivalent of a doctorate and be highly sophisticated in research and curriculum design.

Senior Teacher-Learning Engineer

The Senior Teacher is the most advanced person in the methodology of each subject area structure. He is a master practitioner, the teacher's teacher. His responsibility is to translate into viable procedures and designs, the theory and research of the TCRA. He spends a great deal of time working with and servicing staff teachers within each discipline of the curriculum.

Learning Diagnostician

The Learning Diagnostician is the third part of the "self-renewal" unit above the staff level. He is the person to whom the areas of curricular and personal diagnosis rests for the quality of instruction within a school. He is aided by a Guidance Technician.

Staff Teacher

The Staff Teacher spends all of his time with students. However, many of the nonprofessional aspects associated with this teacher's role are removed through the employment of paraprofessionals.

Associate Teacher

The Associate Teacher is either a teaching intern, or a subject area specialist with an A.B. without the fifth year of graduate work. He works with groups of students within his area of expertise. State certification will need to be applied to the Associate Teacher role.

Academic Assistant

The Academic Assistant is a non-certificated employee with at least an A.A. degree in a subject area. The Academic Assistant would function as an assistant to the staff Teacher in resource centers or open labs within the school.

Educational Technician

The Educational Technician is a skilled person in media or library resources; or one who prepares curriculum packages. The ET does not work with students.[8]

The researchers speculated that effects of differentiated staffing implementation would be primarily in the category of education and would include the following:

1. Teacher Salaries and School Budgets. Every indication from pilot programs is that instructional salaries will increase rapidly at least during the first year of the implementation of differentiated staffing. It is likely that the basic salary schedule will continue to provide for salary increases and of course differentiated responsibility will provide for sizeable salary increases for certain teachers-from a current $8,000 annual salary to a $18,000 annual salary if a model like Temple City is implemented. This assumes that the qualified personnel is available to match the salary, which is unlikely.

2. Student Transfer from School to School. The specialization effected with differentiated staffing should help to provide for proper diagnosis of an incoming student's academic status and thus aid transfers.

3. Rate of Progress. Increased staff specialization should result in a school system being better able to accommodate a student as an individual, progressing according to his own capabilities and motivations.

4. State-Local Fiscal Systems. Emphasis will have to be given to the concept of "extra duty, extra pay," rather than to the concept of formal education and experience, in the structuring of a fiscal support system.

5. Standardization of Instruction. Using the state as an educational system, standardization of instruction would be effected only through a statewide testing program in which mastery of a subject matter became a requirement.

6. Standardization of Instructional Material and Tests. See the above paragraph.

III. Individual Rate of Student Progress

IPI was defined in the introduction as a program of study tailored to each student's learning needs based on his competencies and his characteristics as a learner. The following are the requirements for any individualized instruction system:

1. That each student be permitted to work at his own level of accomplishment in each subject matter area, and that he be free to move ahead in the work to the next level of accomplishment as quickly as he masters the prerequisits.

2. Guide lines must be established as behaviorally defined objectives for each subject matter area with clearly defined sequences of progression.

3. A comprehensive testing program must be developed for determining the student's level of achievement while progressing through the curriculum sequence.

4. Students must be provided with instructional material for increasing competence in self-directed learning. The student must be provided with standards for self evaluation of his progress.

5. The demands of IPI require that the teachers receive special training in the evaluation, diagnosis, and guidance of the individual student's progress so as to be able to organize the instruction for the individual.

6. The teacher must utilize far more detailed information about the individual student in order to organize an appropriate program of instruction.

The implications of the first requirement are that there be an upgraded school system and, though not absolutely required, a year-round continuous program. In addition, it is essential that the student be able to proceed at his own pace. The latter is not only a requirement for IPI but its rationale, as well.

The remaining requirements for IPI deal almost exclusively with the teaching staff and program development. These include provision for a differentiated teaching staff, with each master teaching for each subject area responsible for curriculum development and progress evaluation in his area. Under the master teacher there would be qualified teachers in the subject matter assisted by paraprofessional aides. In addition to these, there would be technical aides who are professionals in their own areas, such as librarians, audio-visual specialists, and student counselors. In terms of facilities, IPI utilizes most of the standard forms of equipment but requires that the equipment be used in different ways than is common today. Tape recorders with prerecorded material, test material, open-space study area arrangements, computers for administration, and self-contained classrooms would be in regular use.

If a student proceeds at his own pace, there must be limited restrictions on his choice of (a) subjects he studies at any time; (b) the rate of progress in the subjects; (c) attendance at school.

With individual progress; the student proceeds through a course of study at his own pace. Some of the implications of this concept are as follows:

1. A bright student can advance as rapidly as he can achieve competency in the subject matter and is not held back by the class.
2. The slow student is not pressured to keep up with the better students, and more attention can be given to this individual.
3. Students can proceed in different subjects at different rates of progress.
4. Breaks because of sickness, work, vacation, etc., would not penalize the student, as happens in the traditional system of instruction where the student must keep up with his class. Breaks could occur whenever necessary or convenient for the student. This makes it possible for parents to take vacations as convenient for them.
5. With traditional instruction special remedial programs are required to help the slow student maintain the progress of better students from grade to grade. IPI permits the recycling of work for the individual so that special remedial programs are unnecessary.

Possible effects of individualized programs on various activities and institutions are indicated in the following section.

A. Community Programs:

1. Recreation programs - Individual student progress alone would not seem to effect community recreation programs' progress, although a year-round school program could.
2. Civil order - Civil order is affected indirectly. Individual progress may have two influences:
    a. Student frustration and resulting social antagonism may be reduced. If the student is not forced to conform to class progress or to become a failure, some of the tensions resulting from forced progress or the stigma of failure may be eliminated.

    b. Student "drop-outs" should be appreciably reduced due to greater student interest and a flexible program. "Drop-outs" from school are a potential or actual source of crime and civil disturbances as well as social and economic failures.

B. Family Group:

1. Vacations - The student can take breaks as he wishes without undue interference with his program of study, therefore, families can take vacations at a time most convenient for them. This eliminates the necessity for taking vacations primarily during the traditional three month break in the school year.

2. Child care -

    a. Individual progress in a 12-month school program would permit parents to take their small children out of school as convenient, and for varying lengths of time. The parents, particularly the working mothers, would not have the major problem they are now faced with each summer of providing for care of their children, stopping work during the summer to care for the children, or letting the children fend for themselves.

    b. From their school experience under IPI children would gain greater capabilities in constructively directing their own activities. This would reduce the requirement for direct and continuous supervision.

C. Industry and Business:

1. Scheduling of Vacations -

    a. This will require more co-ordination between employer and employees. Some employers give vacations at a fixed time most convenient for the employer. This is usually during summer when the employee can take his whole family, i.e., when school is out. It may be possible to vary the time to suit production needs and not disadvantage the employees if the children can be taken out of school at any time.

    b. It is also possible that the employee will want to take vacations at times other than when the employer wishes to give them.

2. Absenteeism - To the extent that a flexible school program would remove conflicts with the work schedule, it would reduce absenteeism, especially by working mothers.

D. Tourist Trade:

1. Employment - Individual rate of progress by students permits the student to take a break as is convenient for him. This makes possible family vacations during any season of the year.

a. At present most vacations are taken in June, July, and August. Resort facilities become over-crowded. Employment in the tourist trade reaches its peak during these months and then declines. If vacations could be taken at will, they might be distributed more evenly throughout the year. This need not happen, but most surely winter vacations would increase. Some Northerners would leave the rigors of the North for a few weeks in the South. Southerners might visit Northern ski resorts as a change. This is not possible under the present circumstances of required school attendance.

b. It is also possible that winter vacationing in tropical areas abroad would increase. This would strengthen a process already started, and might be detrimental to domestic tourist trade, reducing the total employment in that branch.

2. Facilities - At present, facilities for the tourist trade must be sufficient to supply the requirements at peak periods. If vacations were more evenly distributed throughout the year, fewer facilities would be required and the utilization rate would be higher.

E. Labor Market

1. Part-time employment - Some students because of financial need or desire to do so, try to work part-time during the school year. At best, this handicaps the student in his homework. Perhaps at worst the student is over-tired and is retarded in his school work, receiving low grades or failing. If the student could proceed at his own rate of progress without homework (IPI does not call for homework), the possibility of part-time work without penalties would be greater. A number of possibilities are open: 1) A lighter study load; 2) A slower pace while working in evenings; 3) Full study load and maximum pace for fewer days during the week, leaving one or two days open for work.

2. Seasonal employment - Student employment is generally concentrated during the summer months. Free to take breaks at his convenience and proceed at his own pace, a student could take jobs when the best opportunities are available to him. This is not necessarily during summer months. (Even agricultural work does not conform to these months in many areas. Planting may be before the school ends in the spring and harvesting may occur after school resumes in the fall.) Jobs that youth can do may well be of the casual type and of short duration, occurring

randomly throughout the year and not necessarily on weekends. Peak season full-day employment, as at Christmas, could be taken. (The normal school program is disrupted during this season anyway.) Instead of flooding the labor market during summer months, the students not finding employment or not wishing to work could continue their studies. This would result in a measurable reduction in unemployment.

F. Education

1. Teacher salaries and school budgets - Teacher salaries would be affected by the extension of the school term and by differentiated staffing as was previously discussed. Continuous student progress alone would seem to have no effect on salaries. However, school budgets would be affected primarily because of the cost of multiple media which need to be used under a continuous progress plan. In addition, expenditure for progress evaluation would be increased.

2. Student transfer from school to school - The transfer of a student is always a problem involving proper evaluation of a student's academic status. Difficulties would arise if a student transferred from a continuous progress program to a traditional school program in which teaching is geared to the class average rather than to the individual.

3. Rate of student progress - The individualized continuous progress plan would require a continuous evaluation program which would be time-consuming and costly. Management and evaluation of data would require sophisticated personnel and a sophisticated data system.

4. State-Local fiscal system - This was discussed partially under point one of this section. It is obvious that an individualized or continuous progress program would be more costly, requiring adjustment in a state-local fiscal system. The policy, for example, of allocating funds by a classroom or teacher unit would be ineffective if it costs $1,500 annually to educate a disadvantaged youngster as compared with a cost of $500 annually to educate a youngster from an average American socio-economic background.

5. Standardization of instruction - Continuous progress programming would tend to standardize instruction, since each youngster must complete given units and achieve a certain test score prior to beginning another unit.

6. Standardization of instructional materials and tests - Effects are suggested by the previous category.

7. University and college entrance - More effective articulation between universities and colleges and secondary schools would become necessary. For example, students who completed advanced courses at the secondary school level would need to be placed in appropriate university courses as freshmen.

8. Computer-managed instruction - Continuous progress would require the handling of voluminous data. Computer-managed instruction becomes imperative.

SECTION THREE:

Findings

I. Research Setting: School System Organization in Florida

Florida schools are operated under what is basically a "county unit" system. Each of the 67 counties constitutes a separate administrative school district, but, of course, county school systems are subject to laws enacted by the Legislature and regulations and policies of the State Board of Education.

Responsibility for the progress of education in Florida (at the state level) is shared by the Legislature, which enacts the laws governing the educational system, and the State Board of Education, which not only implements these laws once they are passed, but provides leadership and stimulus for necessary change and improvement.

The State Board, under the Constitution of 1968, is composed of the top elected officials of the state. The Governor serves as president of the board and the State Superintendent of Public Instruction as executive secretary. Other members are the Secretary of State, the Attorney General, the Comptroller, the Secretary of Agriculture, and the State Treasurer. (See organization on following page.) Among the most important duties and responsibilities of the State Board are:

1. to serve as the state's highest leadership agency for school improvement;

2. to adopt and use for guidance a long-range program for the development of the state system of public education;

3. to adopt the rules and regulations necessary for implementing and enforcing Florida school laws;

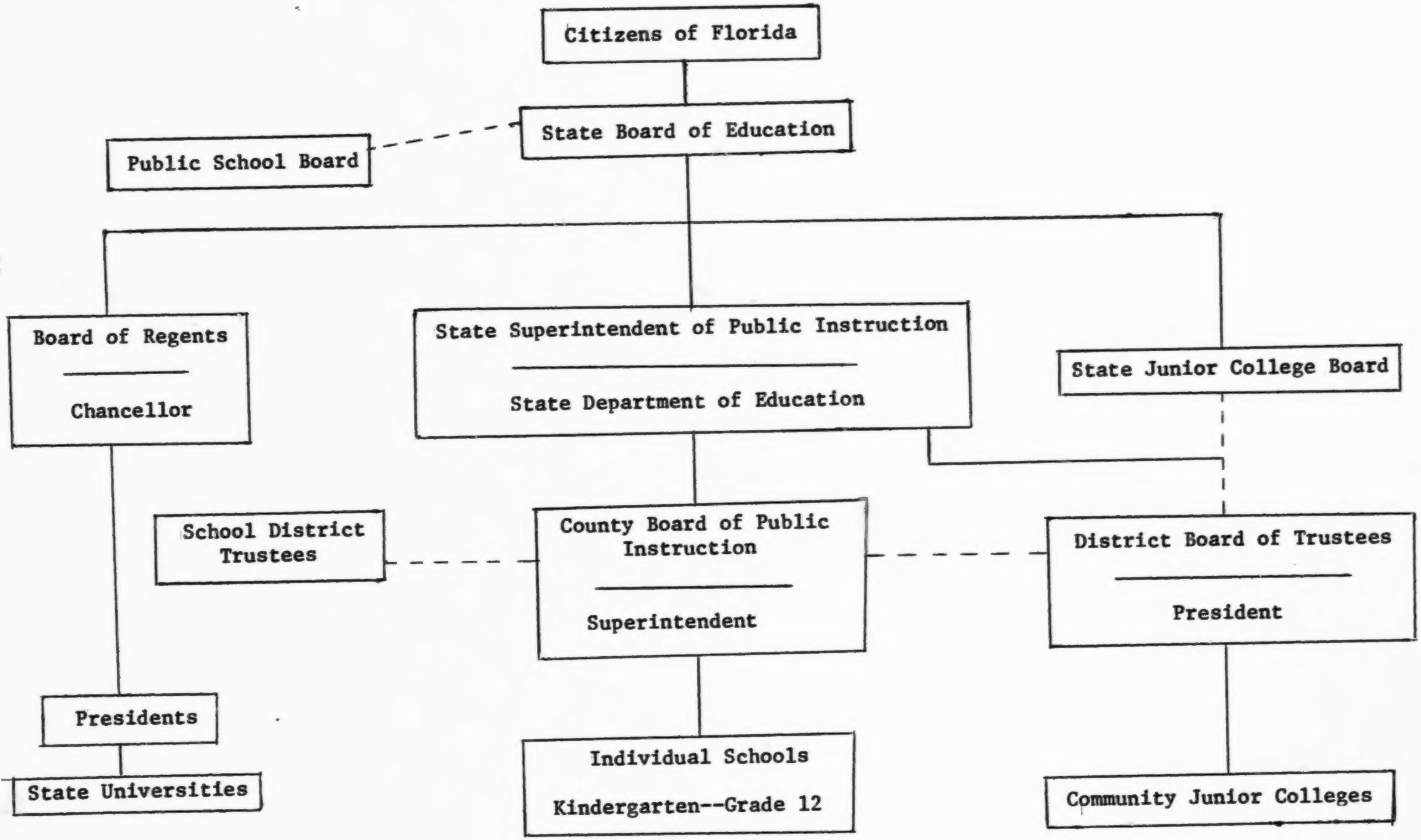
4. to establish minimum standards for all phases of education in the state;

5. to act as the State Board of Vocational Education to administer vocational education and vocational rehabilitation programs;

6. to approve plans for cooperation with the federal government and with other agencies;

7. to conduct hearings and revoke for cause teacher certificates as authorized in Florida school law; and

STATE SCHOOL SYSTEM ORGANIZATION


Citizens of Florida
State Board of Education
Public School Board
Board of Regents
Chancellor
State Superintendent of Public Instruction
State Department of Education
State Junior College Board
School District Trustees
County Board of Public Instruction
Superintendent
District Board of Trustees
President
Presidents
State Universities
Individual Schools
Kindergarten--Grade 12
Community Junior Colleges

8. to authorize all forms and reports necessary for uniformity, accuracy and completeness in the state school system and act as issuing agency for certain types of bonds for school construction purposes.

Public institutions of higher learning, other than the junior colleges, come under the supervision of the State Board of Regents. Under the general control and supervision of the State Board of Education the Board of Regents develops rules and regulations necessary for governing the state universities. It appoints all administrators, faculty and other employees.

The State Junior College Board establishes statewide policy for the operation of public junior colleges and for coordinating junior college programs with other institutions, subject to the approval of the State Board of Education.

The Florida Public School Board was created by a Special Session of the State Legislature in 1968 to serve as an advisory group on all phases of public school education. The State Superintendent of Public Instruction is the chief administrative officer of the Board.

II. IPI in the Rural Community: Gadsden County, Florida

The population of Gadsden County in 1966 was 45,000. Between 1950 and 1960 there was an excess of outward migration over inward migration equal to 4.4 percent of the total population. The county's total population increased during this period, however, since there were more births than deaths.

In 1966, 60 percent of the Gadsden County population was Negro. Only 2 percent of the counties in the United States had a higher percentage of non-whites.

A distinguishing feature of Gadsden County is the poverty of a large number of its residents. In 1966, 36.4 percent of the families in the county had incomes of less than $2,500 and accounted for 6.6 percent of the income in the county. At the same time, 9.5 percent of the families having incomes exceeding $10,000 accounted for 61.1 percent of the total income. Only 4 percent of all counties in the United States had a larger percentage of families with incomes under $2,500. In 1966, 52 percent of the families in the county had incomes below the Social Security Administration's poverty cutoff level.

In 1960, 31 percent of the population 25-years and older had less than five years of schooling. This was the third lowest in Florida and can be compared with the national norm of 7.8 percent.

The major source of income and employment in the county is tobacco growing, with employment concentrated in the harvesting season. The primary non-agricultural employment is in the tobacco curing and packing houses.

Continuous Year-round School Program

There was a consensus among those interviewed that a continuous twelve-month school program could not be introduced in the Gadsden County school system. Such a program would be resisted by almost all sectors of the community for purely economic reasons.

A. Community Programs:

1. Recreation programs - Under a year-round school program, most summer recreational programs could be transferred to the schools, but this possibility may be irrelevant. As shown below under Labor Force, it was considered impossible to introduce a twelve-month school program in the county.
2. Civil order - There is no problem of idle youth in Gadsden County during the summer school break. With ample job opportunities, the majority of the youth are employed. A twelve-month school program would not improve this situation.

B. Family Group:

Vacations by family groups is not an important consideration for the majority of families in this county, since their level of income does not permit vacationing. It would be absurd to discuss whether they would prefer to have their vacations in the summer or winter.

Child care for working mothers seems not to be a problem in the summer months, since children are taken to the fields to work or put under the shade of a tree. In fact, a twelve-month school program would make it more difficult for some of the mothers to work, as they would need to prepare the children for school in the morning and be at home to meet them in the afternoon.

C. Industry and Business:

Industry is virtually non-existent in Gadsden County and a year-round school program would have no noticeable influence on it. Business in the county is mostly local trade and tobacco shipping. The local trade would not be affected by a year-round school program.

D. Tourist Trade:

Since there is no tourist trade in Gadsden County, the adoption of IPI in other areas would not affect the county in this respect.

E. Labor Force:

The economy of the county is based almost entirely on tobacco. The harvest starts around the 15th of May and lasts until the middle of July. During this period, every available person from the age of six or seven is employed in the fields. Following the harvest, a large number of older school age children work in the tobacco packing sheds.

Since these children are a main source of labor for the tobacco harvest, the starting and ending of the school year have been adjusted to conform to the needs of the harvest. This adjustment of the school year was in the past confined to the segregated Negro schools, but as integration of the schools proceeds it is likely to be effected in all of the county's schools. Any attempt to introduce a continuous twelve-month school program would be resisted by the tobacco farmers, as it would eliminate or jeopardize a significant part of their labor force; the parents would resist it because it would reduce considerably the family income which for a very large number (52.0 percent in 1966) is already below the poverty level.

Under present circumstances, compulsory attendance at school during the summer could not be enforced as there is no sizeable element in the community that would be willing or even desirous of enforcing it. At the same time, it would be uneconomical to operate the schools on a voluntary basis of attendance during the harvest. County school authorities estimated that voluntary attendance would be less than one-third during the summer, and state support of the schools is based on daily school attendance. With such drastically reduced attendance, there would be no real argument that there is greater utilization of educational facilities. The researchers concluded that under these circumstances a twelve-month continuous school program could not be introduced in Gadsden County in the foreseeable future.

Nevertheless, there are several reasons why it might be desirable, both socially and for the sake of the children, to change the situation described above. For example, one area of social progress would be to reduce or eliminate child labor in the fields while increasing the possibility of children's getting at least one good meal a day.[9] Because such a restriction on child labor would intensify the hardships of the families involved, parents might have to be compensated directly in some way for the resulting loss of income. If this were done, a rigid inspection system would be required to insure that the children were not, in fact, being employed. The maintenance of such an inspection system would present problems, since it would be contrary to local interests.

A very small minority in Gadsden would welcome a change that would remove the children from work in the fields. They argue that this would serve to force recognition of certain changes in economic conditions. The competitive position of the county's tobacco growing industry has been maintained by the availability of a large supply of cheap labor. With wages sufficiently low any type of labor could be employed. However, the minimum wage, first reaching $1.15 per hour in February, 1968, and $1.30 per hour in February, 1969, is making it impractical to employ many elderly workers. The amount of work that the elderly can perform is not sufficient to cover the increasing minimum wage.[10] As enforcement of the minimum wage law becomes more stringent and is applied to child and juvenile labor, which is also less productive than prime age adult labor, it will become necessary to rely entirely on adult labor. A year-round school might help force the issue by removing some of the child and juvenile labor from the fields. This seems a bit far-fetched, considering the unlikelihood of a year-round school system being introduced. Even if a year-round school program were introduced, vacations from school could still be concentrated during the tobacco harvest season, thus defeating any attempt to use the program to keep the children out of the fields.

As a last resort, school attendance might be made compulsory and the schools required to be open throughout the year.[11] Assuming that this could be accomplished in some way, the result would be to destroy the economic base of the county. Without the school age workers, there would be insufficient labor for the harvest unless the tobacco crop were significantly reduced or adult labor imported for the season. A sizeable reduction in the size of the tobacco crop would result in a greatly reduced income for the county and eventually a loss of the population that depends on tobacco. If adult labor were to be imported for the harvest, there would still be a considerable financial loss to the county as such workers would not spend most of their earnings in the county. Any change that resulted in a higher cost for the harvest (an adult labor force, whether local or imported, would increase costs) would speed up a process that has already started: capital in tobacco growing in Gadsden County is being diverted to other low cost areas outside the United States. In short, the economic condition of the county and of many families would be worsened by any change preventing the work of child and juvenile labor, no matter how desirable from a social standpoint.

F. Education:

The primary educational concern with a year-round program was in the area of the school budget. If a year-round schedule were developed, teachers would have to be employed on a 12-month rather than a 9-month basis, to provide maximum continuity of learning experience. Where teachers would not work through a full school year, two or more teachers might have to be employed to fill a single position. An additional and continuous problem would be to provide in-service training programs for substitute teachers, or else they would be serving merely as babysitters.

1. Teacher salaries - The additional cost of a year-round educational program would result primarily from the drastic increase in the number of 12-month teacher contracts. School boards would be more enthusiastic about year-round programs if state aid formulas provided most of the added costs.

   In Gadsden County the school system operated a remedial and enrichment summer program for six weeks during 1968. In addition, there was a summer swimming course for eight weeks operated by the school system. Approximately 2,000 students voluntarily participated in the programs, and approximately 100 professionals were employed at an average salary of $1,000. All of the instructional costs were provided through state funds.

2. Administrative salaries - Implementation of a year-round program would not result in increased administrative salaries since administrators generally are employed for twelve months, as are supervisors on state supervisory units.

   As was noted previously in this report, a 12-month school year is not an essential feature of an IPI program, although it is desirable. Due to the circumstances existing in Gadsden County, the investigators assume that even if IPI were adopted, the 180-day school year would be maintained for the foreseeable future.

Differentiated Staffing

In Gadsden County, as elsewhere, the effects of differentiated staffing would be primarily in education.

1. State and local education - Salary schedules adopted for instructional personnel in a Florida county must provide equivalent salaries for teachers with equal qualifications whether the teacher is in elementary, junior or senior high schools. However, supplements for additional responsibilities, duties, or services may be paid when provisions for such supplements are included as a part of the official salary schedule of the county. Incorrect salaries resulting in over-payments and under-payments must be adjusted to conform with the official salary schedule.[12]

Increased attention is being given in Florida to the concept of flexible staff operation and differentiated levels of responsibility and compensation for services performed. In all probability, salary schedule provisions in some counties will be affected as exploratory and pilot programs are initiated under the Educational Improvement Expense fund (EIE).

Two statewide efforts have been made prior to EIE to implement merit pay programs. The 1957 session of the Florida legislature provided for the establishment of special career increments as a part of the salary schedule of each county. No state funds were involved but plans were developed in each county during 1957-59, evaluation conducted in 1959-60, and payments initiated in 1960-61. This program aroused a strong opposition from teachers and was made optional in 1961. It was replaced by a program of State Competency Awards of $400 from state funds in 1961. This program also met opposition and was repealed 1963, although payments were continued during the 1963-64 school year.

The Superintendent of Gadsden County Schools perceived differentiated staffing as a means to provide for academic departmental chairmen but related that it was difficult to find someone who was an academician as well as a human relations expert. He pointed out that differentiated staffing provided for merit pay and that merit pay did not work in Florida under a previous law because there was no objective means to evaluate teacher performance.

2. In-service training - The concept of self-renewal is a key feature of differentiated staffing, and the superintendent pointed out that personnel in short supply such as guidance and special education specialists had received salaries to participate in summer-month in-service educational programs. In certain instances, the Gadsden County School District paid tuition costs of teachers attending university summer school programs.

Florida's Education Improvement Expense fund (EIE) could provide most of the funds for financing in-service education. The law currently allows approximately $1,720 per teacher unit (equivalent of 1 classroom with 27 students) under EIE, and staff development is mandatory.

The superintendent said he was unable to find teachers to instruct Gadsden County teachers in the use of the varied audio-visual equipment. His complaint was that professors and others taught about the use of visual aids on a very general level only. Testing, as required for IPI, would also present considerable difficulty for teachers not specially trained in this area, and retraining would be difficult.

The superintendent doubted that most teachers already in the school system could be used in differentiated staffing programs. Therefore, recruiting qualified personnel would be a primary problem in introducing an IPI program. It would be impossible to retrain a large percentage of the present faculty, since they probably would not accept change, according to the administrators. The best alternative perceived was to select the type of teachers required for IPI from outside the school system.

A differentiated staff was considered beneficial to teaching, and at the time of these interviews, many teacher aides were used in the school system, particularly under federal programs. The major problem perceived in employing master teachers was the county's lack of funds to finance such a program. Another problem was the fear that the master teacher might be unable to get along with other teachers.

3. School budget -

a. Teacher salaries - As was discussed under state and local education, above, the Gadsden County Superintendent of Schools did not feel that differentiated pay would work since differentiated staffing was a euphemism for merit pay and merit pay did not work in Florida under previous law.

If Gadsden County were to implement the Temple City differentiated staffing program, the county's instructional teams might include personnel similar to those employed in the Oak Avenue School in Temple City at the following salaries:[13]

	Position	Number	Salary
1.	TCRA (Teaching and Curriculum Associate)	1	$ 16,000
2.	p^1 (Grade One Principal)	1	15,500
3.	ST (Senior Teachers)	3	43,500
4.	T (Staff Teachers)	18	157,500
5.	AT (Associate Teachers)	7	45,500
6.	AA (Academic Assistants)	4	24,000
7.	ET^3 (Education Technician, Grade Three)	1	6,000
8.	ET^2 (Education Technician, Grade Two)	1	5,000
9.	ET^1 (Education Technician, Grade One)	2	8,000
10.	C^2 (Clerk, Grade Two)	1	6,000
11.	C^1 (Clerk, Grade One)	2	10,000
12.	SM (School Manager)	1	8,000
		42	$345,000

In Temple City, the 29 teachers and one principal, all with a minimum of a bachelor's degree, plus the various supporting personnel require a budget of $345,000 for the total instructional team of 42 members or $11,500 per teacher unit.

The average annual salary paid principals, teachers, and other instructional staff in Gadsden County (438 teachers and 16 principals) was \$5,219 in 1966-67.[14] The employment of 16 secretaries and 46 teacher aides was provided in the county schools in 1967-68 at an average salary of \$3,000 and \$2,000, respectively. Thus the costs for instructional teams (excluding school district central office personnel) were as follows:

1.	Instructional personnel (438 teachers and 16 principals)	- \$ 2,369,426
2.	Secretaries (16)	- 48,000
3.	Teacher aides (46)	- 92,000
		\$ 2,509,426

The cost per teacher unit was \$5,529 as compared with \$11,500 in Temple City.

b. Clerical salaries - Using the Temple City model, each instructional team of 30 professionals would require 3 clerks. Gadsden County would need to add approximately 30 clerks in order to implement the Temple City program.

c. Facilities utilization - Differentiated staffing could be best implemented in facilities planned for team teaching and individualized instruction. Provisions for flexibility, expansibility and ease of alteration should extend through all phases of school building planning. Provisions would include small and large group teaching areas, individual study spaces, and an instructional materials center.

Gadsden County school facilities are of the traditional type and were not planned for differentiated staffing. However, lack of the perfect facility should not be a roadblock to implementation of differentiated staffing since a school system such as Duluth, Minnesota has implemented a form of differentiated staffing in buildings similar to those of Gadsden County.

Individual Rate of Student Progress

According to those interviewed, one of the greatest concerns among the whites in Gadsden County relative to the integration of schools is that the white children will be held back in their education. The parents believe that this would result from the need to teach at a slow pace because of the large percentage (two to one in the school system) of lower achieving Negro students in the classes. There would be the additional possibility of having to lower the level of instruction to accommodate the slower student. A program of IPI could go far to eliminate such problems. For this reason, those interviewed thought there would be considerable support for a system that held out such a promise. This support might falter, however, if the IPI program required greatly increased expenditures from local funds.

One fact of importance here is that a county such as Gadsden does not greatly benefit directly from quality education. From the standpoint of the County, most of the resources expended on education are a subsidy to other labor market areas. A large part of the cost of education is expended on the schooling of the Negro children who are a large majority of the school population, and whose parents contribute little to the direct financial support of the schools. One particular complaint was that the Negro population receives an education and moves away. Those moving away are then replaced by Negro families imported by the Gadsden tobacco farmers from more economically depressed areas in Mississippi and elsewhere. Under these circumstances, local interests would hardly be enthusiastic about higher costs for education.

It became apparent that the introduction of IPI, which, at least at the outset, would be more costly than the traditional system of instruction, would be resisted on the basis of cost in Gadsden County. Therefore, to introduce this program would require considerable additional state and federal financial support. Some interviewees felt that any move that would tend to raise the level of education, and thus the general status, of Negroes would be resisted by influential people with dominant positions in the County. It was felt that this would be true whether greater costs were involved or not. The following possible effects of individual student progress were identified in this study.

A. Community Programs:

One concern about individual progress of students was the extent to which the program would be permissive. That is, to what extent the student would be free to determine when he would attend school and when he would not attend school. Those interviewees concerned with civil order were of the opinion that there should be some restrictions on the freedom of the student to be out of school. They considered this freedom a possible or potential threat to civil order. If students were on the streets during school hours, they would probably be suspect and would have to show why they were not otherwise occupied. This is due to the feeling that, in general, idle youth is a potential source of trouble to the community.

B. Family Group:

1. Child care - From the standpoint of child care, the individual progress of the student in school would neither create nor solve any general problem in the County. Because it would allow flexibility in school attendance, it might help some working mothers, particularly in the larger towns where they are domestic workers. However, social workers were concerned that if students were not required to be in school regularly, some parents would not make the effort each day to send them.

C. Labor Market:

Individual student progress would make it possible for students who wish to and are able to find employment to work part-time. There are a number of part-time jobs that high school boys in particular could perform, such as working in service stations, and other activities mostly of a service type. At the present time such employment is usually limited to the summer vacation or to the weekends.

Individual student progress would make possible other combinations of time when work could be done on a part-time basis. Many Gadsden County students are from low income families, and must work for financial reasons. Others, from more well-to-do families, work because it gives them a personal income other than that which they receive from their parents. The general assumption among those interviewed was that, aside from the extra spending money earned, this type of employment is good for the development of the juvenile.

In a county such as Gadsden, with such a low level of income and so many families living below the poverty level, it becomes apparent that any work performed by a juvenile is taking employment away from some adult who could possibly perform the same work. Under these circumstances, the employment of school-age youth is not an unmixed blessing.

D. Education:

There was some evidence that adoption of IPI would be resisted due to a belief that boys and girls would be "pushed" through school so fast that they would be unable to cope with college life or the world of work. An emerging tendency for parents to pressure students to make the best grades and to achieve higher than other students was believed to create many psychological problems for the children.

Almost everyone interviewed said that getting students to study when the program was highly permissive would be one of the major difficulties with IPI. A juvenile counselor indicated that when students were busy they did not get into trouble. In recent years, stronger enforcement of compulsory school attendance laws has resulted in a percentage of daily attendance for Negro students equal to that for the white students. Interviewees thought that if students were allowed to take audio-visual materials home with them, and to remain home to complete projects, it would be a possible excuse for parents to return to an old habit of keeping students home from school under any pretense.

The Superintendent of Gadsden County Schools had reservations about permitting students to complete a K-12 program in a shorter period of time--i.e., in 10 years--as a result of attendance in an IPI program. He feared sending students into college or into the work world at an earlier age than currently is the practice. However, he believed that it was feasible for the home to maintain a measure of supervision over the younger high school graduate if he commuted to a nearby community college.

III. IPI and the Urban Community: Duval County, Florida

In August, 1968, all of Duval County, Florida was incorporated into the municipality of Jacksonville, which thus became the world's largest city in area. Primarily an urban area, Duval County's needs and problems differ greatly from rural Gadsden County, though Jacksonville is Southern in its cultural aspects and activities. In 1966, Duval County had an estimated population of 522,300, primarily city dwellers. Some 83.5 percent of the people in the county were living in places with over 2,500 inhabitants. In 1966, 22.4 percent of the families in Duval County were considered below the poverty level in terms of income, and 23.6 percent of the population was non-white. The non-white group contained over 44 percent of all poor families in the county.

The major employers in the county are the insurance carriers, followed by wholesale trade; retail trade; catering and personal services. Approximately 45 percent of all jobs in the county are considered white collar occupations.

Most of the individuals interviewed in Duval County were administrators of large organizational units, municipal, state, civic, or business. Both the general setting and the nature of their responsibilities seemed to influence their responses to questions. One person interviewed made the disgruntled remark that the trouble with the city is that it is full of "Georgia Crackers," implying that they may be successful and competent businessmen but they have a very narrow view of public affairs, particularly education. This view was not supported by our interviews.

In 1964, the public's unwillingness to adequately support the Duval County public schools led to the disaccreditation of the schools by the Southern Association of Colleges and Schools. This brought a reaction on the part of those elements interested in promoting the city's growth and development. They found that any city with such a public school system has difficulty in attracting people or industry. Re-evaluation of educational needs led to changing the law so that the Superintendent of Public Instruction could be appointed from among all candidates regardless of residence rather than being elected by popular vote from among candidates residing within the county. In addition, there has been a greater allocation of funds for public education. For the school year 1963-64 there was an expenditure of $3115.31 per student. A major change was made for the school year 1965-66 when the per pupil expenditure increased by $82.00 to $424.00 per pupil.

Continuous Year-round School Program

Those interviewed in Duval County expressed a strong interest in a continuous twelve-month program. They were concerned about the possible additional cost of such a program but thought that at least part of the cost could be offset by the elimination of some summer programs. Unlike Gadsden County, no strong opposition to a year-round school program was expressed on economic grounds.

A. Community Programs:

1. Recreation programs - The county has many special summer recreation programs designed to keep the children occupied during summer months when school is out. These programs are not related to any school activities and are not operated by the school system, but are designed to fill in recreation program gaps resulting from the schools' summer break. This shift of responsibility during the summer presents some unnecessary problems. Because the Recreation Department conducts programs on land belonging to the public schools, cooperation between these authorities is necessary. Unfortunately, such cooperation is not always easy to be effected. On the other hand, summer recreation programs employ many teachers as monitors or supervisors, providing them with a source of supplementary income during the school vacation.

   Part of the expense of extending the school year to twelve months could be covered by transferring the payments teachers and athletic directors receive in the summer from the Recreation Department to the Department of Public Instruction. Those interviewed assumed that with a year-round school program most of the special recreation programs could be taken over as part of the regular school program. It was thought that this would result in greater utilization of facilities, better coordination of recreation programs, and far better utilization of professional recreation personnel.

Supervisory activities performed by teachers in the summer recreation program is to a considerable extent an under-utilization of professional and instructional skills, if not an outright waste. These teachers' abilities are more fully utilized in regular school activities.

2. Civic order - The law enforcement officers of Duval County considered law enforcement more difficult in the summer months during the school break than at other times. A considerable part of the problem during these months was related not to increased crime, but to what are called "nuisance" calls, such as those pertaining to young people being on peoples' lawns. These calls increase the volume of work even though they are not of a serious nature.

   At the end of each summer it is necessary to carry out an educational campaign to remind drivers about school crossings. A twelve-month school program would help maintain a school crossing alert without an intensive educational campaign each year. However, a twelve-month school program would require the employment of school crossing guards for another three months at an additional cost exceeding $44,000 per annum, at present employment and wage rates.

   Although the Sheriff's Department considered the summer months to be the busiest season, data provided by the Jacksonville Police Department did not indicate any seasonal effect. The appearance of a seasonal work increase may be due to summer reductions in the number of policemen. Vacations for policemen are scheduled for the summer months because most of them have school-age children and this is the only time they can have a family vacation. In addition to the vacations, younger policemen take leave for military reserve duty during the summer. It is most likely that these absences do put more work on those remaining at any time and create the impression of a greater volume of work during the summer.

   It was not indicated that the presence of school-age youth on the street was a major factor in summer riots in Jacksonville although there were school-age youth involved in one or two such disturbances.

B. Family Group:

1. Family vacations - There was general consensus that the summer school break has an undesirable effect on family

vacationing, because it severely limits the time when family vacations can be taken. Such a limitation was also considered undesirable because it forces most employees to take their vacations in one concentrated period of the year. This causes considerable disruption for business and manufacturing. A continuous twelve-month school program which permitted students to take vacations at their convenience would help to eliminate the concentration of family vacations during the summer months and would be helpful both to employers and to family groups.

2. Child care - Duval County has a high proportion of women in the labor force, many of them married women with small children. A year-round school program which would permit these children to stay in school while the mother works would eliminate the problem of summertime child care for many working mothers.

C. Industry and Business:

Most business and industry in Duval County does not have a marked seasonal nature, and the large additional labor force created by the summer vacation from school is not an economic necessity for this community, as it is for Gadsden County. At present, many of the business and manufacturing employers attempt to provide additional jobs during the summer, for students who wish to work. By reducing the large seasonal influx of students, a year-round school program would reduce the need to make special provisions for their employment. Also, the elimination of forced vacations in summer would greatly ease planning of work programs, and those interviewed favored a year-round school program on this basis.

D. Tourist Trade:

Opinions concerning the effects of a continuous school year on the tourist trade were mixed. Most people interviewed thought that nothing would change people's vacation habits. This would mean that the present pattern of vacationing, concentrated mostly during the summer, would continue regardless of options created by a continuous year-round school program, as long as people have the choice of taking their vacation when they wish. Others remarked, however, that many people in Duval County are already going outside the immediate area for their vacations, to other parts of the United States and abroad. They also noted that there was a tendency for many people to take their vacation during the winter season, rather than in the summer, and thought there would be an increased probability of winter vacations with a continuous school year and that the present pattern of vacationing would be modified.

E. Labor Force:

A continuous year-round school program eliminating the summer break would have the effect of reducing the large influx of students onto the labor market in the summer. Most of the people interviewed were of the opinion that this effect on the labor force would be entirely beneficial. Of course, the situation in Duval County is entirely different from that in Gadsden County, where a large increase in the labor supply is necessary during the tobacco harvesting season. In Duval County there is no such seasonal increase in the demand for employees, and from the standpoint of the labor market there are no objections to a year-round school program.

During the summer of 1968, 250 students were employed in the Duval County school system under a work-study program financed by the Federal Government ($75,000) and by the State ($25,000). The purpose of this program was to provide income for the students; education was not part of the program. Such special efforts to provide summer employment would not be necessary if the school program were continuous the year-round. The work and income could be distributed on a part-time basis throughout the year.

F. Education:

The educational authorities in Duval County responded favorably to the concept of a twelve-month school system.

1. Background: The Duval County schools and the public - There are 126,000 students enrolled in the Duval County school system in 1968-69. Since 1964, when the Southern Association of Colleges and Schools refused accreditation of the County school system because of inadequate financing of schools, the system has been undergoing considerable change.

   In the 1963-64 school year, the current expenditure from state and local funds was $315.31 per student, and in 1964-65 expenditure per pupil was $342.00. Because of reactions to the disaccreditation, in 1965-66 the allocations to the schools were increased to $424.19 per pupil. In the school year 1966-67 there was another slight increase to $430.46 per pupil. In 1967-68, the expenditure was $437.71. The current expenditure per pupil during 1968-69 is estimated to be $459.20. However one may view the adequacy or inadequacy of the present expenditure for education in the county, it is evident that considerable effort has been made to remedy a situation which has existed for a number of years. This effort has thus far brought about accreditation for only four of the county's seventeen secondary schools.

In the 1968-69 school year the major educational issue in the county was whether the county's superintendent of public education should be elected or appointed. The resulting vote was in favor of the appointment of the superintendent. On January 1, 1969, the new superintendent was to be appointed by the board of education. This person was selected on the basis of merit and, in this instance, came from outside the State of Florida.

All of which seems to indicate that, when faced with the need and provided with information required to evaluate the educational system, the people of the county react in a favorable manner. On this basis and that of interviews conducted in the county, the researchers believe that IPI and a twelve-month school program could be adopted if presented in the proper manner and introduced gradually rather than all at once.

2. School budget - There are several aspects of the current situation in Duval County which would tend to reduce the cost to the taxpayers of instituting a year-round school system.

    a. Teacher salaries - Guidance counselors are on a twelve-month contract in the high schools and on an eleven-month contract in other schools. Many of the regular teachers and athletic directors, as noted above, are employed by the city or county government during the summer to fill out their year of employment. For these teachers, only the differential between their summer salaries and their regular salaries would be added cost to the taxpayer, with a twelve-month school program. State funds paid the salaries of all teachers in the county's 6-week summer school program in 1968, which enrolled 36,000 students. If the state continued to provide these funds under a 12-month program, these teachers' salaries would represent little added cost to the taxpayers.

    b. Administrative and clerical salaries - During the 1968-69 fiscal year, the entire central staff and all high school principals in Duval

County are employed on a twelve-month basis. Each high school has two secretaries on twelve-month contracts and other school secretaries are on an eleven-month contract.

c. Cost of facilities - All recently constructed school buildings in the county are air conditioned and would be appropriate for a twelve-month school program.

d. Student repeats - An element of cost that could be reduced with a twelve-month IPI program is that of student repeats. In the 1967-68 school year 5 percent (5,591) of the students were not promoted. Under the present discontinuous school program, most of these students will be required to repeat an entire grade, because, as a general rule, the student can only repeat the work required for promotion by repeating the entire school year. If all students who are not promoted were to repeat another school year at the present rate of per student expenditure ($459.20 per student) this would amount to a cost of $2,567,387 for the year. With a continuous twelve-month system, and an IPI instructional program, the student would automatically be recycled only through the work which he had not mastered, rather than having to repeat a whole school year. This recycling would naturally involve some additional cost by retaining the student in the school for a somewhat longer period, but it would cost far less than the present system of retaining him for a full year. Also, with IPI it becomes possible for the student to make up the time lost in recycling by increasing his rate in other areas.

Differentiated Staffing

As was indicated in the Gadsden County section of this report, the effects of differentiated staffing would be primarily in education.

1. State and Local Education - As was discussed previously, increased attention is being given in Florida to the concepts of flexible staff operation and differentiated levels of responsibility and compensation for services performed. The Duval County Superintendent of Schools spoke favorably about

the potential of differentiated staffing, and related that the concept was being implemented partially in the county. For example, instructional personnel employed at the central office were responsible for development of K-12 academic programs in their respective areas of expertise. In essence, they hold positions comparable to that of the TCRA in the Temple City model.

Teacher aides are employed primarily through federal funding. In addition, a full-time curriculum assistant is employed in each school.

The Duval County salary schedule has included provision for supplement for additional responsibility. In addition, the salary schedule provided for a teacher to receive a $300 annual increase for each 15 hours of college credit earned beyond the bachelor's degree in his teaching area. However, there were no immediate plans to develop a salary schedule comparable to that of Temple City.

2. In-service Training - Duval County has employed a full-time person to develop and administer the EIE (Educational Improvement Expense) programs. Much reliance has been placed upon a continuing development of a cooperative relationship between the county school system and Jacksonville University in the in-service program. For example, the university reduces tuition by one-third for teachers enrolling in the university. The Duval County staff also uses university facilities for teacher workshops.

The Superintendent of Duval County schools stated that the in-service programs would work more effectively if teachers could receive college credit for their participation.

Individual Rate of Student Progress

Almost without exception the people interviewed in Duval County expressed concern about the possible permissiveness of IPI. They were of the opinion that students required considerable direction and guidance and that, if left free to determine their own activities, they would not study. In fact, some interviewees were so concerned with this problem that they were unable to consider possible effects of IPI if it should prove effective.

A. Community Programs:

1. Recreation programs - A program providing for individual rate of progress by students would give greater flexibility in the student's schedule and thereby permit him to engage in recreational programs, both

in the school and the community, as he desires. Even the staggered school year does not permit such flexibility, because the student is enrolled for three quarters. If the period of his enrollment does not correspond with a seasonal recreational program in which he would like to participate, he is simply out of luck.

2. Civic order - None of the interviewees thought that individual rate of progress, as such, would be disruptive of civic order. However, concern was expressed about whether the student should be free to be out of school without special permission and without a specific purpose.

   If, as claimed by those most involved in IPI programs, individual rate of progress reduces frustration, social antagonism, and the feeling of failure that leads eventually to dropping out of school, there would be a reduction in problems of civic order. In Duval County there are regular occurrences (at least once a week) of school drop-outs robbing teachers or school children.

B. Family Group:

1. Vacationing - A program providing individual rate of student progress allows a student to take a break from school for whatever purpose, including vacationing. The people interviewed generally considered such an increase in individual freedom of choice as beneficial. Although a tendency for people to take their vacations at times of the year other than the summer was noted, most of those interviewed were of the opinion that people will not readily change their habit of vacationing in the summer months. The investigators hypothesize that the present pattern of summer vacationing may result from the lack of alternative times when the family can go together. If families were free to take vacations together at any time, this pattern might change.

2. Child care - Social welfare directors in particular, and some employers, were of the opinion that providing for individual rate of student progress alone would not greatly affect the care of children. Combined with a continuous year-round school program, however, considerable benefit might be derived by families with working mothers. Because children could attend school throughout the year, working mothers would not need to make special babysitting arrangements for the summer months.

Also, the child could take school breaks when convenient for the parents without undue interruption of the child's studies. This could also work to the disadvantage of the child in one respect. Some mothers, whether working or not, would view the school as a baby sitting institution (many do today) and leave the children in school rather than having them at home. In many instances the school might be a more wholesome environment than the home, and, therefore, preferable although the student would miss the "breaks" from the school routine.

Both in Duval County and Gadsden County the welfare workers were concerned that the freedom and permissiveness of an individualized program could have some detrimental effects. For example, if students were not required to be at school each day at a specified hour, many parents would not regularly make the required effort to send them to school in the morning. This would most likely affect those who are already classified as disadvantaged. It would be necessary, therefore, to have some regulations regarding regular school attendance. This will be discussed at greater length later in this report.

C. Industry and Business:

1. Scheduling of vacations - Opinions were unanimous among employers that if vacations could be evenly distributed throughout the year as a result of individual student progress permitting families to take vacations at any time, it would be a great advantage to industry and business. Where the work has seasonal peaks, vacations could be planned for the slack work seasons, which often occur during the regular school year.

2. Absenteeism - It was thought that individual rate of student progress would have little effect upon the greater part of the absenteeism in industry and business, although it might reduce absenteeism among working mothers.

D. Tourist Trade:

The great majority of those interviewed believed that family vacation patterns would remain unchanged, regardless of options created by new instructional approaches. If vacation patterns were unchanged, there would be no effect on the tourist trade.

Although it is true that patterns of behavior are sometimes difficult to change, and that the patterns established for family vacations are reenforced by the possibilities of recreation that the summer months offer, it is not safe to predict that no changes would be made if the opportunity existed. When given a choice, people often act differently than they do in a pre-determined situation. If the growing affluence which permits increasing numbers of Americans to travel to distant vacation spots were combined with the possibility of taking the children out of school when convenient, changes in vacation habits might well occur.

E. Labor Market:

1. Part-time employment - All of the employers in business and commercial activities were enthusiastic over the possibilities offered by individual rate of student progress for part-time employment and training. All of them employ students on a part-time basis whenever possible, but it is not always possible to coordinate the time when the work must be done with the time the students are available. Most of those interviewed have had some experience with work-and-study vocational education programs and remarked that even in these programs that the students were seldom available for work at a convenient time of the day, making it difficult to utilize them in effective work situations. All interviewees thought IPI could go far in eliminating such problems.

2. Summer influx of graduating students - With one exception, all employers interviewed said that if graduation times for students were distributed throughout the year, it would ease their recruitment problems considerably. One employer noted that at present, in order to recruit the better graduates, it was necessary to hire people in June for jobs which would not be necessary until much later in the year. Such practices, while necessary under the present system, result in added payroll expenses, the need to "make work" for employees hired prematurely, and more complicated training procedures. The one employer not following this practice said his company employed the workers available when needed and never in excess of the company's needs. He seemed to assume that he could always get the quality of

worker he wanted at any time during the year. With the turnover rates for youth in their first year or two of employment this is probably possible.

F. Education:

The Duval County educational authorities were highly enthusiastic concerning the possibilities offered by IPI but raised questions about certain areas. The primary hindrance to the adoption of IPI was thought to be the preparation and experience of the present teachers. Educated and taught to teach in group or traditional classroom conditions, these teachers would require considerable retraining and reorientation for the different approach.

Educators interviewed in Duval County did not favor a high degree of permissiveness. In their opinion, students not only require, but want to be directed in their study programs, and they must be under supervision if they are to progress. This attitude also applied to school attendance.

The transfer of students from schools without IPI to schools having IPI probably would not create problems, as the student could fit into an IPI program without difficulty. A student transferring from schools with IPI to schools not having IPI would probably require considerable adjustment unless his progress had been at the same rate in all subjects.

SECTION FOUR:

Possible Effects of the Introduction of IPI Upon the Labor Market for Youths

The 1968 Manpower Report of the President includes a chapter on "Bridging the Gap From School to Work." Many of the problems raised in that chapter could be solved by the adoption of IPI in public schools. Although the report suggests possible changes in school graduation schedules, as in the following quotation, it does not consider the problems raised by such changes as are suggested.

> Also needed is an examination of the extent to which youth unemployment rates could be reduced by spreading high school graduations over the year. At the present time 97 percent of high school graduates in the United States leave school within the same 2 or 3 weeks in June. The heavy load that this puts upon public and private employment offices and upon the personnel offices of companies might well be diminished, and greater inroads made into youth unemployment rates, if the load were spread throughout the year. There has been little realization or awareness of the extent to which the adjustment of high school schedules over the last few generations has resulted, more and more in uniform graduation times and has perhaps contributed to the youth unemployment problem. There has been no exploration of the practical possibilities of reversing the process nor of the extent to which such reversal might help in alleviating youth unemployment.[15]

> Putting the nation's secondary schools on a year-round basis, and having these graduates enter the job market in three or four groups rather than all at once, would make the process of absorption much easier.[16]

The adoption of IPI offers a variation of the above suggestion and goes beyond the recommendation for graduating three or four groups each year. As noted earlier, a continuous twelve-month school program is superior to any program with discontinuous periods of study.

Effects of Present School Schedules on Employment and Unemployment

Under the current school-year system, considerable numbers of young workers participate in the labor force during the summer months, raising both the level of employment and the level of unemployment. The introduction of IPI, with a year-round continuous school program, can provide more flexibility in the labor force participation of young workers. The likely effects of such a change upon the labor market depends upon the assumption one makes.

The monthly data used here cover the period 1963 through 1967, and are taken primarily from Employment and Earnings and Monthly Report of the Labor Force and the Monthly Labor Review, U. S. Department of Labor. A five-year average of monthly data for the 16-19 year old age group in the civilian labor force and in employment and unemployment is the basic data used in this analysis.[17] These data are given in Table I. Chart I on the following page, shows graphically the variations in the data.

Table I

Five-Year Averages of Monthly Data
of the 16-19 Year Old Age Group in the Civilian Labor Force
(C.L.F.) and Employment Status, 1963-1968 (thousands)
(Five Year Annual Average = 100)

	C.L.F.	Emp.	Unemp.	Index:CLF	Index:Emp.	Index:Un.
Jan.	4903	4198	705	83.1	83.3	81.9
Feb.	4969	4241	728	84.2	84.1	84.6
March	5006	4288	717	84.8	85.0	83.3
April	5259	4480	779	89.1	88.9	90.5
May	5562	4655	907	94.2	92.3	105.3
June	7330	5751	1579	124.2	114.1	183.4
July	7832	6682	1145	132.7	132.5	133.0
Aug.	7393	6568	825	125.3	130.3	95.8
Sept.	5631	4898	733	95.4	97.1	85.1
Oct.	5679	4955	724	96.2	98.3	84.1
Nov.	5627	4852	776	95.3	96.2	90.1
Dec.	5638	4930	709	95.5	97.8	82.3

As is seen in Table I and in Chart I, changes in employment more or less parallel changes in the size of the labor force. However, the increase in employment during the summer months is not sufficient to absorb the large increase in unemployed youth. A study by A. M. Ross[18] points out the importance of summer work to young workers and calls for intensified planning of the work program by private and public employers so as to employ more youth in the summer. The widespread adoption of IPI might have more effective results than a public appeal; some of the possible effects of IPI's adoption on the employment of youth are shown below.

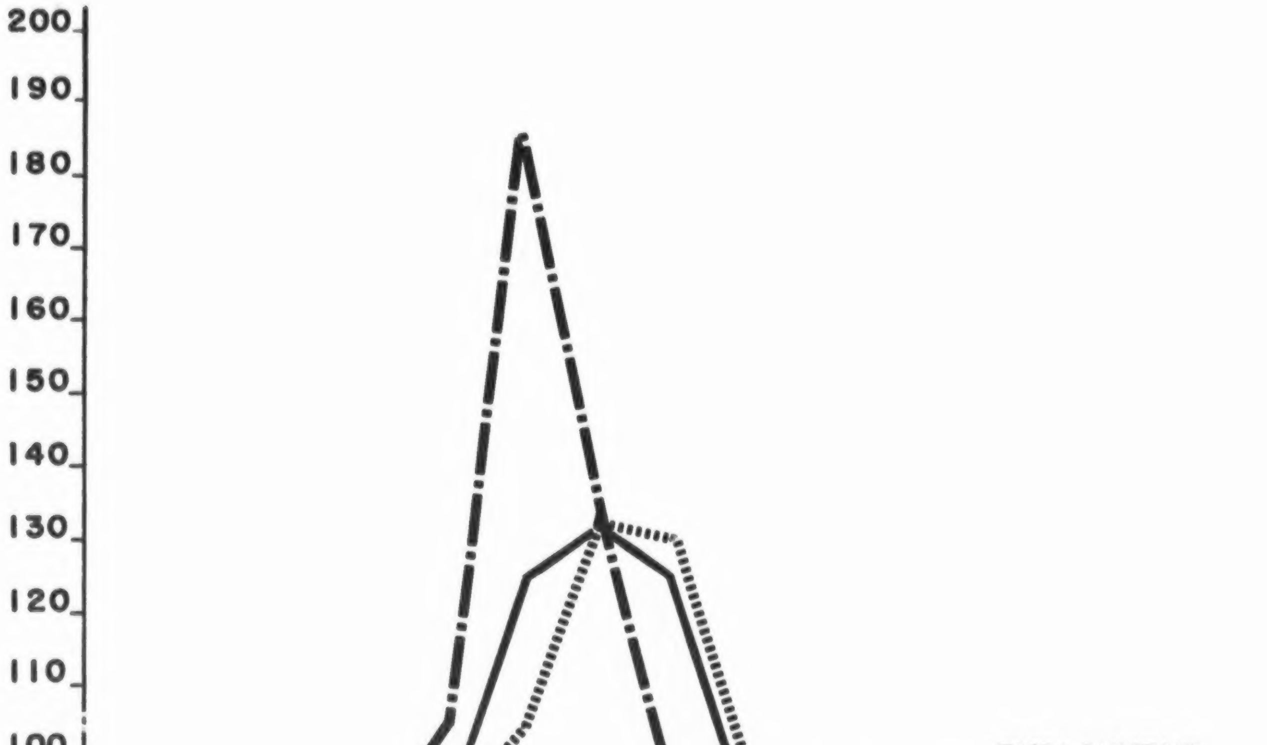
Possible Effects of IPI on Employment and Unemployment

It is questionable to what extent employment adjusts itself to the size of the labor force. Although some forms of employment may be held over until summer in order to take advantage of the large influx of cheap labor, normally the size of the labor force will tend to adjust

CHART 1

CHANGES IN THE INDEXES OF EMPLOYMENT, UNEMPLOYMENT AND CIVILIAN LABOR FORCE

(16-19 YEAR OLD AGE GROUP)



in the same direction as changes in employment. When there is an increase in employment, more people enter the labor force hoping to get work. When employment declines, people leave the labor force because looking for work becomes a hopeless endeavor. This is, of course, not true with students, who are thrown on the labor market not because of its requirements but because school turns out for the summer, though perhaps even greater numbers of youth would enter the summer labor market if more jobs were available.

In the absence of adequate job vacancy data, we will use the number actually employed as an indication of the demand for or the capacity to employ young workers. This is valid, since the percentage of unemployed youth, based on a five year monthly average never fell below 11 percent for any month, and if the capacity to employ youth had been greater, the rate of unemployment would probably have been less. Therefore, the capacity to employ youth is here treated as given, and the pattern of monthly changes in the level of this capacity is assumed to be generally unresponsive to changes in the availability of labor.

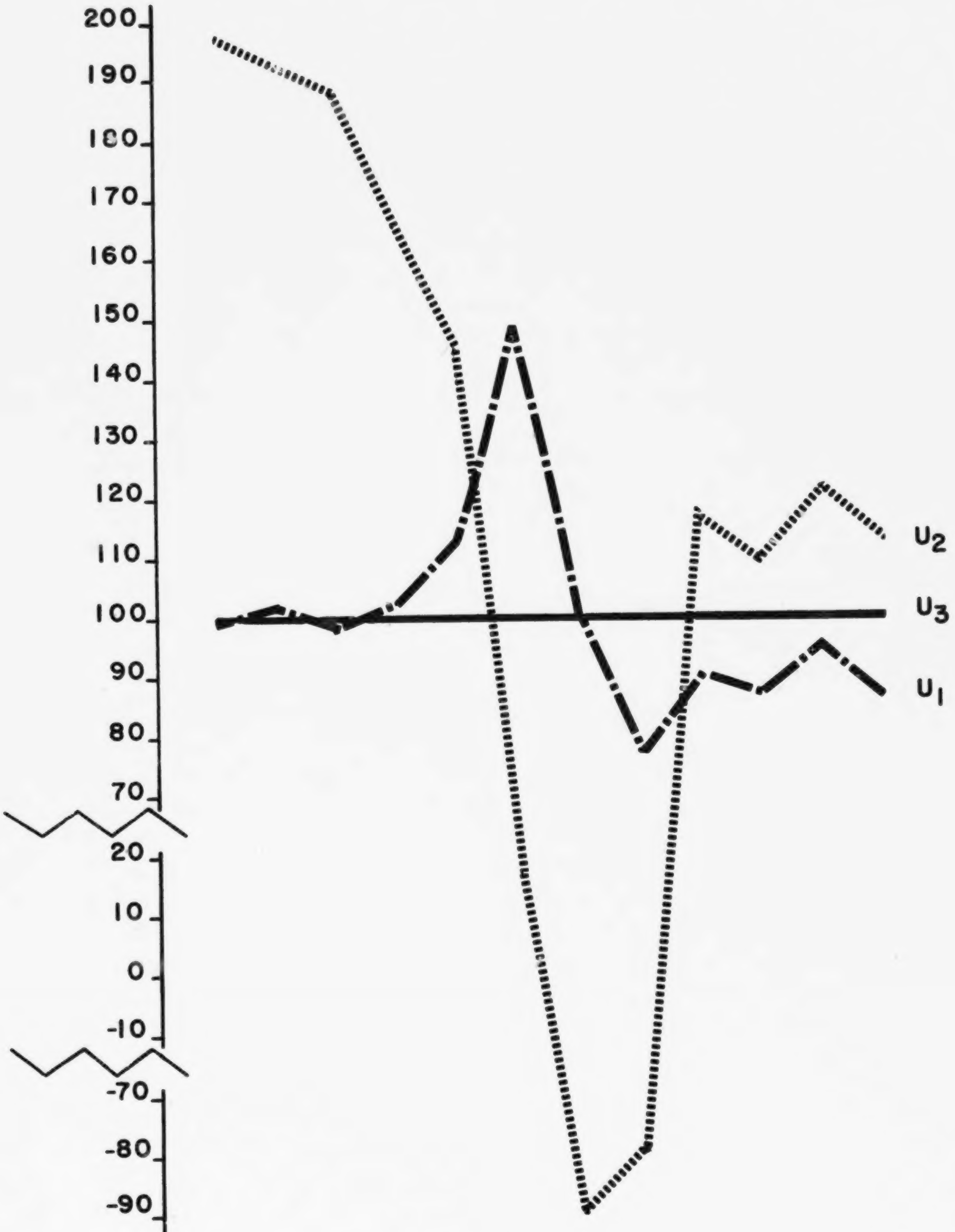
The total average yearly size of the labor force and the average total yearly unemployment are also given. The monthly distribution of these totals, shown in Table III, could be assumed to change, however, in accord with certain changes in school programs. For instance, we can assume that the number of youth entering the labor force during any month would be affected by the adoption of IPI, since students progressing at their own pace would graduate at different times during the year. With IPI, one might expect the number graduating from high school and the number entering the labor market each month to be fairly evenly distributed throughout the year. Also, since a student under IPI would be able to take breaks in his studies or cut down on the study load at any time convenient for him, he probably would seek work at times when the market offered him the greatest opportunities. The following three cases present (1) observed labor market conditions, (2) the situation if students entered the market evenly throughout the year, and (3) the situation if students responded to actual labor market conditions.

Case I. This is simply the observed labor market conditions. The unemployment rate shown in Table II and summarized in Chart II, following, is calculated for each month by taking the five year average of data for each month for the civilian labor force and unemployed persons. The rate of unemployment is the number of unemployed persons as a percentage of the civilian labor force. These monthly rates of unemployment are shown in Table IV. The arithmetic mean of the monthly unemployment rates is equal to 100 in calculating the monthly variation in the unemployment rate ($^{U}1$). The greatest change in the rate of unemployment occurs in June, but this is preceded by a sharp rise in May, when students start looking for employment in anticipation of the summer break. By August, the rate of unemployment falls to the lowest point for the year. During August the rate of employment remains much the same as in July but the number in the labor force falls; therefore, unemployment is less.

2

CHART II

MONTHLY VARIATION OF UNEMPLOYMENT RATES



Case II. With students proceeding at their own pace, it might be assumed that they would enter the labor force with the times of entrance distributed randomly throughout the year. This would mean that the number entering the labor force would be the same for each month. The rate of employment is assumed as fixed.

Table II

Monthly Variation of Unemployment Rate
Under Different Assumptions

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
U_1	99.3	101.4	98.6	102.1	113.1	148.3	100.7	77.2	90.0	87.6	95.2	86.9
U_2	197.6	192.3	187.0	165.1	144.5	17.8	-90.4	-77.4	117.1	109.6	121.9	113.0
U_3	100	100	100	100	100	100	100	100	100	100	100	100

Table III

Average Monthly Size of Civilian Labor Force Aged 16-19
Under Different Assumptions

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
L_1	4903	4969	5006	5259	5562	7330	7832	7393	5631	5679	5627	5638
L_2	5902	5902	5902	5902	5902	5902	5902	5902	5902	5902	5902	5902
L_3	4899	4958	5017	5253	5430	6728	7850	7[illegible]73	5725	5784	5666	5784

Table IV

The Unemployment Rates Which Form the Basis for the Four Indexes

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
U_1	14.4	14.7	14.3	14.8	16.4	21.5	14.6	11.2	13.0	12.7	13.8	12.6
U_2	28.9	28.1	27.3	24.1	21.1	2.6	-13.2	-11.3	17.1	16.0	17.8	16.5
U_3	14.3	14.5	14.6	14.7	14.3	14.5	14.9	14.4	14.4	14.3	14.4	14.8

Under these conditions the variations in the rate of unemployment would be as shown in Table II, U_2. These conditions give extreme variations in the rate of unemployment with far too many entering the labor market in the winter months and far too few in the summer months. This situation would be less desirable than that observed under existing conditions.

Case III. It is assumed here that students enter or leave the labor force in response to changes in employment opportunity. Thus the labor force would have a monthly distribution in fixed proportion to the number of employed persons. Here again the demand for labor or rate of employment is assumed to be fixed. If the labor force varies in direct proportion to changes in employment, the rate of unemployment will be constant (Table II, U_3). Of the three situations this latter one would seem to be the most desirable. With unemployment spread evenly throughout the year, it would be much easier to plan for additional employment to reduce it.

In the above situation there has been no reduction in the total amount of annual unemployment. We have only redistributed the total unemployment in different ways throughout the year. The major fluctuation in the rate of unemployment is due at present to the entrance of out-of-school and graduating students onto the labor market in the summer, creating a labor supply in excess of the demand. With a year-round school program, and with individual rates of progress, it would be reasonable to assume that there would be no such excess of labor forced onto the market every summer, in which case the total annual unemployment would be lowered by the amount of this summer excess. Thus, the situation assumed in Case III would probably lead to an actual lowering of total annual unemployment.

With IPI, students would be more likely to remain enrolled in school until a job was available, rather than, as at present, entering the labor force as an "unemployed" while he seeks for work. There would be no advantage for the student in not doing so. A student enrolled full-time cannot be considered as unemployed in the usual sense, although he may be seeking employment.[19] If a job ends, the student will reenter school and thus not be unemployed. In this way unemployment of students would be virtually eliminated.

In the preceding, certain labor market variables were manipulated so as to simulate possible effects on the labor market resulting from different hypothetical situations. No attempt was made to estimate the amount of unemployment that could be avoided if IPI were adopted generally, although it was suggested that the annual summer increase in unemployment is due almost entirely to the influx of students onto the labor market.

The age group, 16-19 years old, in the labor force can be classified as enrolled in school or not enrolled. One critical assumption made for the following analysis is that the labor force participation rate for the not-enrolled is constant throughout the year; i.e., they are always in the labor force, therefore, any major change in the monthly average size of the labor force would be caused by changes in the labor force participation rate for enrolled workers. There is no reason to assume that the not enrolled workers will seek employment more in the summer months than in other months. To do so would mean competing with enrolled workers for temporary summer jobs, as there is no reason to believe that there would be more permanent job openings in the summer months than in other months.

Table V

Average Civilian Labor Force Aged 16-19
By School Enrollment for October 1964 - 1966 (thousands)[20]

	C.L.F.
Total	5750
Enrolled	2814
Not-enrolled	2936
% enrolled	49%
% not enrolled	51%

The data for those enrolled or not enrolled in school are for the month of October each year. As noted, the proportions of enrolled and not-enrolled are assumed to be relatively fixed during the school year and the number of not enrolled is assumed not to increase appreciably during the three summer months. Our estimate is that the proportions of enrolled students in the labor force increased from 49 percent during the regular school year to 63 percent during the summers.[21]

In Table I it was noted that there is an average monthly 16-19 year old labor force of 5,363,000 for the nine-month period of September through May. The three-month average size of the labor force for June, July, August is 7,518,000. The difference between the nine-month average and the summer average is 2,155,000, or the average increase in the labor force during the three summer months due to the entrance of students on the labor market. Some of these were employed in the increased number of temporary summer jobs, but the average monthly unemployment was 1,179,000. Although not all of the unemployed were students, we may still assume that the unemployment was due to the excess of students on the market, since many of the jobs held by the students might otherwise have been filled by the non-enrolled. Thus the excess labor force during the summer due to students seeking summer employment was a monthly average of 1,179,000. Hence, if schools were open during the summer, and if students entered the labor market only to the extent that jobs were available, there would be no unemployment for this age group during the summer. To put this in more realistic terms, the unemployment would not have exceeded the level for the regular school year. We have already suggested that a simple change in definitions, so that a student enrolled full-time in school is not classified as unemployed, would reduce further the rate of unemployment throughout the year.

The foregoing should only be taken as a very crude estimate of the employment effects of a universal IPI program. The data given are only to illustrate the nature of possible effects.

Vocational Education: the Transition from School to Work

One of the major concerns expressed in the President's Manpower Report was the transition from school to work. This transition is usually rough and haphazard, with no systematic program for smoothing the way. For most of the youth, there is considerable shopping around, shifting from job to job until a suitable job is found to the liking of the individual or until the person becomes a casual worker and virtually unemployable.

Youth leaving directly from high school to work are usually unprepared and unqualified to enter into specific job situations. There is discrimination against youth in employment just as there is against the aged. The youth coming out of high school and wishing to work is usually unable to step into a job of any significance and must go through a long period of preliminary training before he can earn an adequate income. Moreover, today's early retirement or early redundancy caused by technological change, requires that the worker reach full earning capacity as early as possible, in order to maximize his life-time earnings. It has often been suggested that there should be better coordination between industry, business and schools, so that the student will be better trained vocationally before he goes to work. Each state has its own vocational education program for preparing students who do not intend to seek a higher education, but these programs are criticized as inadequate by everyone concerned. The employer complains that the type of vocational education which the student receives is completely unsatisfactory or insufficient. The educator complains that the vocational programs are to narrow for students whose formal education will probably end with high school.

The President's Report noted various experiences with vocational education. These experiences

> . . . suggest that substantial improvements in educational curriculums and more linkages to the reality of the work world will help substantially to improve the preparation of youth. While advocates of general or college-bound preparation still argue with those who want to see more content introduced throughout the school curriculum, there is growing agreement on several points: (1) that curriculums can generally be enriched by material drawn from real work situations; (2) that all students should be given much more information concerning career paths and opportunities, and much earlier than is now usual; and (3) that the vocational school program should offer opportunities for students with a far wider range of interests and abilities to try out vocationally oriented curriculums and go on not only to jobs but also, increasingly, to higher education--either directly or after periods of employment. In any case, the secondary education system in this country must strive to reach the point at which all youth who receive a high school diploma but do not go on to further education are adequately equipped to find and keep a meaningful job.[22]
>
> Perhaps a more extensive program of part-time jobs for youth who are in school but who do not plan to pursue higher education would be fruitful, . . .[23]
>
> Even before entry into the job market the student should have maximum opportunity to explore his abilities and preferences in the real world. The tryout period should take place during school years rather than afterward. There should be a vast expansion of cooperative work opportunities that will open new horizons. Work experience, in fact, should become a meaningful part of preparation for career development and life at several stages of youth--not only at the final

> professional internship stage. The interaction of classroom instruction and practical exposure should be planned to develop the highest level of capacity possible for each young person at the time of his entry into the job market, whenever that occurs.[24]

There are many practical problems involved in trying to improve vocational education under the present type of instructional program existing in most schools. The facilities in the schools for training in most types of vocational education are inadequate, and where adequate they are unrealistic in terms of the actual working situation which the student will face. If a student works part-time as part of the training program, it is likely to interfere with the regular programs of the school. In addition, even where the student is able to work part-time, it is usually unsatisfactory as a learning experience, involving late hours of the day after school, rather than a lengthy period during the day when there can be continuity of activity.

IPI and Vocational Education: Advantages

IPI seems to have marked potential for easing the transition from school to work. First, as noted throughout this report, the nature of IPI permits the student to take a break in his regular academic programs in order to work, take a vacation, or to participate in other desirable activities. This flexibility makes it possible for the student to participate in a vocational program in such a way that he can work when necessary with an employer and study when necessary or desirable, blending the two together so he may obtain the benefit from the combination of activities. This would permit the student to acquire real work experience while still "in school." Thus, the student can become acquainted with a number of different work situations, enabling him to better chose the type of employment he would like to go into when he leaves school. It will also give employers the opportunity to get to know the student, so that their recruiting might be simplified and hiring done on the basis of increased knowledge about the applicant.

IPI as outlined here seems to present almost ideal conditions for vocational education. In fact, the method of instruction, highly suitable for vocational instruction, is perhaps more easily applicable to vocational education than it is to the more abstract social sciences.

With a continuous year-round program of instruction there would be approximately two months added to the time in school each year. In other words, the present twelve-year program could be completed by the average student in ten calendar years, or the program could be maintained at its present twelve years with the addition of two more years' worth of material. This possibility presents a number of problems and offers a number of opportunities particularly in the area of vocational education. Today, vocational education is concentrated in the last two years of high school, the eleventh and twelfth grades, but it is tied in with the regular school program in such a way that the student must be available for formal classes. This complicates the program of working part-time or training part-time in an actual work situation. If all of today's requirements for a twelfth grade education could be completed in ten years, it would leave an additional two years free in which the student could concentrate on a specialized area of vocational activity.

Using individually prescribed instruction, a vocational curriculum could be developed for each individual student to equip him for employment, with general training for a group of occupations or special training for a specific occupation or employer.

Having already completed in ten years what is currently the required curriculum for a high school education, the student would be able to concentrate intensively upon a vocational program which would include individual instruction on a formal basis and work in an actual job situation. These two years of intensive vocational training could prepare a student for most types of skilled or technical work. Having completed his internship during the training program, the student could start immediately upon graduation with an interesting job and an adequate income with little or no additional special training. In many cases the transition might be made without any changes whatsoever, the student having already worked with the employer during his vocational training. He would simply continue on the job as a full-time employee after graduation.

This would approach the ultimate in terms of preparing the student for employability upon leaving school, and could result in virtual elimination of unemployment due to post-graduation job searches and job changing in search of a satisfactory job. This would result in far greater earning capacity for the worker at an early age, as he would not waste the greater part of two or three years, as he does now, before getting settled with some minimum experience.

Such vocational education programs might also eliminate much of the present drop-out problem. One of the major reasons given for drop-outs is that they become bored in school and do not see any relationship between the type of education they are getting and the requirements for employment. An adequate "employment orientated" vocational education program could go far toward preventing such problems. In Jacksonville, Florida, for instance, the holding power of students increased in one secondary school by twenty-five percent, apparently as the result of the introduction of a vocational education program.

IPI and Vocational Education: Problems

Nevertheless, there are still many problems and possible disadvantages involved with such programs, and these must be considered. Today, vocational education is concentrated in the last two years of high school. If two years of school were saved with a year-round school program and the curriculum were unchanged, the current vocational education programs which are given in high school would be completed two years earlier than at present. Thus, the extra two years would be made available for a concentrated program of technical or vocational education. This assumes, of course, that the vocational education currently being offered in high school in the eleventh and twelfth grade could be given to the students at an earlier age. Interviewees in vocational education indicated that children would be able to grasp the present material at a much earlier age, if it were properly presented.

There are a number of questions which would immediately arise regarding a year-round program: Would the two extra years of school be mandatory for students who complete the present requirements for a high school graduation in ten calendar years? How would these two extra years be utilized? Would the student be required to choose between a vocational education program or going to college? Or would he be free to enter the labor market at the early age of fourteen or fifteen? These are questions which must still be answered.

As noted above, a two-year specialized program of vocational education with IPI would permit the design of training programs to suit the needs of a particular employer or even a particular job. This would certainly improve the employability of the students, but perhaps such a program would be self-defeating in the long run, as the immediate availability of a job does not guarantee its future usefulness. Extreme specialization could result in future unemployment if the job were discontinued because of technological change or for any other reason. For instance, many employers would be likely to exploit the possibility of filling specialized jobs by encouraging students to take the special training required. This high degree of specialization for an individual employer might make it extremely difficult for the worker to be employed in another job. While the employer might exploit the possibility of highly specialized training, he probably would not be willing to guarantee the future employment of the worker who has made the necessary specialization. The likelihood of this form of exploitation is evidenced by the fact that employers explicitly criticize vocational education for not providing the individual student with the type of training which would permit him to enter into a job without additional training.

A particular concern of vocational education today is the need to equip the individual to be adaptable to technological change; that is, with the ability to change jobs as technology advances. There is certainly a need to see that vocational education is both sufficiently specialized to provide workers with immediately usable skills, and sufficiently flexible to enable them to acquire future employment, regardless of economic or technological changes. These objectives would probably necessitate a continuous process of education throughout adult life. This process has not been possible for most workers in the past, and although the need is glaringly evident, no satisfactory provision is made for it today.

Even though vocational education combined with on-the-job training has many advantages, there are still large numbers of children enrolled in schools where there are no possibilities for part-time employment as part of the vocational education process. Granted that much vocational training can be provided in the school setting itself, this does not provide the desired bridge between school and work. Providing vocational education exclusively in the school setting assumes that the facilities required for such education are available in the schools, which they are not. This means, among other things, that vocational students coming out of rural schools will be far less adequately prepared to enter into a life of work than those from urban schools, thus accentuating the existing differences in the quality of education between rural and urban schools.

This raises another question: whether the rural schools should be required to provide the type of education and training which will enable students to be employable in an urban setting. Should the tax payers in rural communities, by supporting such vocational programs, be made to subsidize indirectly the urban community? The rural community gets no direct advantage from vocational education aimed at urban jobs for the students. In fact, such programs only encourage rural students to leave the community as soon as their schooling is completed.

This, in turn, raises an even broader problem. At present, most vocational programs are predicated on the assumption that a student should be trained for the employment of the local community. This is what employers assume when they complain that the school does not understand the needs of the employer and does not train the students to be immediately employable. They are thinking in terms of their own immediate needs. According to this concept, vocational training in each community should be suited to that community's needs, regardless of whether all the students could be employed in the immediate area or not. The question then arises whether the student should be allowed to choose the type of vocational education he wishes to receive, regardless of the immediate needs of the community. For instance, should a Florida student be given the training he desires even if such training could only be used in jobs found only in California or New York? Should the local schools system support this kind of training, investing in a program of education that is certain to take the student out of the community upon graduation?

IPI and Higher Education

For students planning to continue their education, IPI and the year-round school program raise additional problems. Assuming that these students would also complete the traditional school curriculum in ten calendar years, would they, at age 15 or 16, be ready to enter a regular university program, or to live on a university campus, or even to enter a junior college program in their own community? Would the universities and colleges be willing to accept freshman who are 15 years old on the average? Would the parents of these 15 year olds be willing to send their children to universities away from home?

If students were required to continue their education in the local schools for twelve calendar years, much of the additional two-years' worth of material for academic students would probably be drawn from the present-day college program. If the college program were brought to the high school, the student would be able to live at home and complete the freshman and sophomore courses before entering college. This would probably go far toward solving the colleges' student population problem and relieving the pressure on college facilities and budgets, since the bulk of the enrollment in higher education is in the first and second years. This alone would permit sufficient savings to justify the additional cost incurred in adopting IPI in the public schools. In addition to this possible saving, the college graduate would start to work on the average two years earlier, thereby increasing both his productivity and his life-time earning potential by two years. On the other hand, college and university programs would probably require considerable adjustments if their student population were two years younger, on the average, than they are at present.

It is possible, of course, that the student would not graduate two years earlier than at the present time; that the two years added to the high school curriculum would not be considered as college courses but as additional preparatory work for college. In that case, the student might still be required to attend college for four years, completing what is today considered a Masters program. This would be in conformity with the present trend for the Masters degree to become the minimum degree.

SECTION FIVE:

Legal Framework for IPI Implementation

There appear to be few legal roadblocks to the implementation of IPI at the county level in Florida. Interviewees from the State Department of Education were generally enthusiastic about the potential of IPI for the improvement of public education; they interpreted statutes and regulations to be flexible enough with few exceptions to permit full implementation of IPI built upon the concepts of the continuous year-round school program, differentiated staffing, and continuous progress. Recent Florida educational statutes and regulations have encouraged and even mandated the implementation of differentiated staffing and continuous progress. At present, the continuous year-round school program has the weakest statutory and regulatory basis of the three IPI concepts.

Although a state department of education bulletin for 1967-68 lists 70 pages of so-called "innovative programs and practices,"[25] the Director of Accreditation stated that only two or three of the programs could be considered as pilot programs which deviate from standards and necessitate a formal application by the county school system requesting state department permission. Any deviation from standards requires the following procedure:

1. Application

   The application for approval shall be submitted by the school with the approval of the county superintendent and board of public instruction to the accreditation committee of the state department of education.

2. Date for submitting application or re-application

   Application or re-application shall be submitted with the accompanying data to the state department of education three months prior to the anticipated date of the inauguration of the program or the continuation of the program for a longer period of time.

3. Application form

   The application for approval shall include the following information:

   a. Standards - Identify the applicable standards that cannot be met, or only partially met, because of the innovative or experimental program to be offered.

   b. Title - Identify the title of the project.

c. Objectives - Give a description of the proposed project, including goals and instructional objectives. The proposal should be brief, but sufficiently descriptive to give a clear picture of the work to be undertaken and evaluated.

d. Subjects - Describe in detail the students who will participate in the study, such as total number of students, age, grade level, etc.

e. Treatment or conditions - Give all details of the treatments. For example, characteristics of the instructional programs for the experimental and controlled subjects.

f. Instruments - Give names and references of all tests and other instruments or procedures used for gathering data. For example, observations of classroom behavior, ratings.

g. Analysis - Identify for each objective the specific analysis procedures to be used. For example, the objectives and number of subjects and variables determining the nature of the statistical treatment of the data.

h. Time schedule - Present a brief calendar indicating the major phases of the project. For example, beginning of pretesting and implementation.

i. Names and titles - Give the names and titles, and a brief biographical sketch of the persons who will be directly involved in the project. (If the number exceeds 10, give examples.)

j. Facilities used - Indicate those school and community facilities to be used in the projects which will be of particular value in the proposed study.

k. Public relations - Identify the procedure by which this experimental and innovative program is to be introduced to, and discussed with, the parents of the students involved as to its needs, workability, and desired outcomes. Efficient means should be formulated to assure periodic feedback in order to insure a meaningful and functional program.

1. Budget - Show estimated expenditures which will be made during the operation of the experiment.

4. Visit by state department representatives.

The state department of education reserves the right to base approval for renewal on a visit(s) by a representative(s) of the state department of education.

5. Request for information

The state department of education reserves the right to ask for additional information pertinent to the program.

6. Length of approval

The approval for an experimental program shall be for a designated period with extension possible through re-application.

7. Evaluation

The school shall submit to the state department of education an evaluation of all approved programs each year on the anniversary date of the program or as otherwise stipulated by the state department of education.[26]

Educational Areas Which Would Be Affected By IPI

I. Continuous Year-Round School Program

A. Compulsory Education

The Florida statutes provide that "All children who have attained the age of seven years or who will have attained the age of seven years by February 1 of any school year or who are older than seven years of age but who have not attained the age of sixteen years, except as hereinafter provided, are required to attend school regularly during the entire school term."[27] Therefore, those students under sixteen years of age completing the equivalent of twelve years of schooling in ten years would need to be in a program approved through the procedure for reporting deviations from standards. More feasible, perhaps, would be a change in the compulsory education law.

Each county which participates in the state appropriations for the minimum foundation program is required to operate all schools for a term of at least nine months (one hundred eighty actual teaching days) each school year; provided, that the state board may prescribe procedures for altering and, upon written application may alter this requirement during a national or local emergency as it may apply to an individual school or schools in any county or counties, and thereupon the apportionment shall be reduced for said county or counties in proportion to the decrease in the length of term in any school or schools.[28]

Florida has permissive legislation providing for extended school terms, subject to state board of education approval as follows: "The state board of education is authorized to approve selected schools to operate an extended school term beyond the required one hundred eighty days of instruction and to authorize the state superintendent to compute a proportionate increase in instruction units based on average daily attendance in such approved schools pursuant to regulations adopted by the state board. Provided however, every such school during the extended term herein authorized, conduct an academic instructional program of the same or greater quality and intensity as that conducted during the required one hundred eighty days of instruction."[29]

At the present time, only the Nova High School in Broward County has mandated a school year beyond the 180 required days. The Nova year includes 220 required days for students in grades 7-12.

From 1954-1963, Florida school districts had authority to have 12-month programs, but only for an entire county rather than for individual schools. The program was never implemented by even one county.

The school day is defined as that "portion of the day in which school is actually in session and shall comprise not less than four net hours for the first three grades; and not less than three net hours in kindergarten and nursery school grades; provided that the minimum length of the school day herein specified may be decreased not to exceed one net hour under regulations of the state board."[30]

According to the 1968-69 proposed Accreditation Standards for Florida Schools, a minimum of 15 credits earned in grades 10-12 is required for graduation. The minimum scheduled time requirement (Regulation 130-5.923) for awarding a high school unit of credit is 250 minutes per week for 36 weeks. No student is permitted to graduate in less than three full school years in grades 10-12 except under an early admission and advanced studies program, as follows:

1. Approval of the district school board.

2. Student is accepted by an accredited college after completion of two full school years and a minimum of 10 credits earned above grade nine.

3. The student may be excused from attendance for the third year of the requirement in 130-5.923.

4. The student may be awarded a diploma of graduation with his regular class or at a time convenient to the principal, based on the following:

   a. The student has completed two college semesters or equivalent with a normal class load, and maintained at least a C average or equivalent.

   b. The student's cumulative folder shall show adequate notations covering the work accomplished while in college.[31]

This regulation would have to be amended or eliminated if IPI were to be implemented as theorized.

B. Fiscal Policies

Florida has developed a state-local governmental partnership under a program known as the Minimum Foundation Program created in 1947 to finance a so-called basic program for pupils in the 67 county units. Included as one of the MFP provisions is a procedure for providing up to a 20 percent increase in the annual allocation for salaries of teachers and principals who are employed during the summer months. The number of such personnel eligible for employment under the provisions of the program is based on one unit for each eight instruction units in the regular 10-month program, and all special units but exceptional child and kindergarten. The summer program was in operation in all of Florida's 67 counties in 1968.

Under current regulations, summer programs are restricted as described below, with the exception of the Nova School mentioned previously. A major change in regulations would have to be effected to legalize a continuous year-round program.

> "Goals of summer programs are: (a) to meet student needs for promotion of credit courses of an academic nature within limits of units available; (b) to provide instruction in reading; and (c) to provide a variety of non-promotional experiences for all students who elect to participate in the program."[32]

The summer program may include in addition to regular instruction summer camping (day); dramatic productions; field trips, library services such as readings, films, records and exhibits; recreation; music; and special vocational and adult units. Florida was the first state to provide a summer education enrichment program on a statewide basis, and more than half of the state's school children voluntarily return to school for some period during the summer to participate.[33] State Board Regulations were revised in 1959 to permit use of remedial reading specialists as a part of the summer program. The 1959 legislature amended the Minimum Foundation Program to permit salary funds (up to 35 percent of the total available) for summer academic instruction. Previously, this kind of activity was entirely supported by tuition payments.

> "Summer school is limited to a one-credit course or its equivalent per summer in grades 10-12; to one full-year course or its equivalent in grade 9; to one new full-year course or its equivalent or two make-up full year courses or their equivalent in grades 7-8; and one year of make-up or remedial work in grades 1-6. In addition to courses for credit, a school may offer any desirable enrichment or remedial program without credit....Courses described in this paragraph shall be conducted for at least a minimum of six five-day weeks, totaling 120 hours."[34]

Classes in academic subjects during the two-month summer period, or fractional part thereof, "shall be of such minimum size as shall be prescribed by the state board, and may be composed of students taking advance work for acceleration purposes, or of students repeating subjects previously taken either for make-up or remedial work, or of both, and such work shall be credited as work taken during the regular school year."[35]

Employment of personnel for summer programs is being made without average daily attendance (ADA) considerations. Twelve-month programs would require changes in this procedure. If a year-round school program were adopted, provision would need to be made for state support of expenses which are not paid by the state for summer programs under current statutes.

Ordinarily, teachers on Special Teacher Services (STS units--principals, materials specialists, guidance counselors, special teachers, etc.) are continued through the summer and may be filled by academic teachers. Supervisors (one for each 100 instructional units) who are paid from state funds are employed normally for twelve months. Certain vocational and adult education teachers may also be employed through the summer. Thus, much has already been legislated to provide the basis for a year-round school as far as personnel are concerned.

The actual MFP allocation for a summer program depends on two factors: (1) the classification (rank and contractual status) of the teacher working during the summer, and (2) the period of approved summer employment. A Rank II, AC, position, for example, carries an MFP value of $6,300 plus $1,260 in additional salary which would be made available for an approved eight-week summer program, or $630 for a four-week summer program.

Counties differ in their policies regarding summer pay. Some counties pay teachers only the salary funds that they receive under the MFP, whereas other counties continue the same regular rate of pay as for the ten-month term. This matter is left entirely in the hands of the county school board. Under a statewide continuous twelve-month school program, those county systems which relied only upon state funds for additional salary provisions for teachers would be in a bad competitive position relative to those counties which added local funds. For this and other reasons, the MFP would need to be developed around a basic twelve-month program rather than around a ten-month plus twenty percent program.

In a feasibility study on year-round schools for Polk County, Florida, in 1966, it was estimated that a 4.23 percent reduction in total net expenditures could be effected under an educational program consisting of four quarters of continuous study. In addition, estimates were that an annual immediate increase of approximately 14.72 percent would be needed to inaugurate the program. This annual increase would decline to less than one-half of that amount after five years and after ten years there would be a reduction of approximately 4.23 in net expenditures.[36]

C. In-Service Training

The 1968 Extraordinary Session of the Florida Legislature approved a Minimum Foundation Program which included an Educational Improvement Expense provision. Under this provision, each county board may use state funds amounting to the total number of instruction units multiplied by $1,720 for the purpose of improving the quality of the county's educational program based on an approved plan. Prior to July 1 of each year, the county board must present to the state superintendent for review and approval a plan for educational improvements to be accomplished during the coming year which are in accord with the county's long-range objectives. In developing these plans for educational improvement, the board is required to give the highest priority to the area of staff development, and the state superintendent is prohibited from approving any plan which fails to give such a priority. Staff development programs may include: (1) basic knowledge and skills required of teachers, (2) programs to update knowledge and skills, and (3) exploratory programs.

Thus, funds are available for in-service education at the school district level. Teachers may maintain certificates at a particular rank through in-service programs conducted at the local level. In addition, teachers may be granted professional leave to attend a college or university. Partial compensation during professional leave may be provided according to a county leave plan. Partial compensation is undefined in the law and the amount is determined by the county school board.

II. Differentiated Staffing

A. Fiscal Policies

There are no legal roadblocks in Florida relative to differentiated compensation for professionals employed in the 67 school systems. Differentiated compensation would be legal providing there is a salary schedule indicating that the school system pays the state minimum salary. Professional training and experience are the prime salary determinants, but the principle of "extra duty, extra pay" is being implemented throughout the state. Thus, a county salary schedule which clearly indicated differentiated levels of responsibility and corresponding differentiated levels of compensation would be judged legal if it were uniformly applied.

The 1968 Special Session of the Legislature requested the State Department of Education to undertake a feasibility study of several staff organization programs, including differentiated staffing. State funding of the feasibility study is meager--$27,000, but the state is anticipating Education Professions Development Act (EPDA) funding from the federal government and has submitted a state EPDA plan which is built upon the implementation of differentiated staffing.

Educational Improvement Expense (EIE) funds, as noted above, can be used for the development and implementation of differentiated staffing programs at the county level. In the specific examples of Duval and Gadsden counties, however, EIE monies were substituted for rollback losses resulting from a legislative provision placing a 10-mill maximum on school tax rates for operating purposes. Thus, Duval County was entitled to $8,648,796 under the EIE allocation for 1968-69, but this was insufficient to replace the approximately $9,000,000 of local funds lost because of the rollback. Gadsden County was entitled to $849,800 but replacement of local funds led to a net $510,000 allocation in 1968-69.

A restriction under the EIE program is that funds cannot be used to increase teacher salaries. Thus, any increase in teacher salaries as would be justified in a differentiated staffing arrangement would have to be financed through local funding.

It is likely that differentiated staffing in Florida would require the use of teacher aides in quasi-instructional roles. In Florida, a teacher aide is a member of the non-instructional staff. As the term implies, a teacher aide may only assist the teacher in carrying out the duties of the position. Section 231.14, Florida Statutes, provides that no person shall serve in an administrative or instructional capacity as a regular or part-time teacher who does not hold a valid certificate to teach in Florida granted pursuant to law under the regulations of the state board. Hence, an aide cannot serve in an administrative or instructional capacity.

The teacher by virtue of his position has certain rights and responisbilities. The right to teach based on a certificate and the responsibilities emanating from a teaching position cannot be delegated by the teacher to an aide.

The teacher aide would receive compensation provided through a county system salary schedule for the non-instructional personnel.

Under the provisions of Public Law 89-10, the Elementary and Secondary Education Act, many Florida counties have employed teacher aides. Under the proposed accreditation standards for Florida Schools, those school systems striving for the highest accreditation (Level 3) must assign teacher aides to perform all non-teaching tasks. A Level 2 rating would require that at least 50 percent of the non-teaching tasks as identified by a survey be assigned to teacher aides, while schools with a Level 1 rating would be required to make a survey annually to determine the non-teaching tasks which might be assumed by teacher aides.[37]

There are no specific provisions for the financing of teacher aides through the MFP. Primary financing would be through local or federal funding.

III. Individual Rate of Student Progress

The proposed accreditation standards for Florida schools, which undoubtedly will be accepted by the State Board of Education, mandate individualization of instruction for the three levels of accreditation and provide a basis for implementation of IPI as stated below relative to continuous progress and relative to individualization of instruction, instructional programs, and instructional materials:

A. Individualization of Instruction

Levels of accreditation on the basis of "Individualization" are determined by direct observation of a school to ascertain what percent of the classes in the school at any given time reflect conditions or instances of behavior consistent with one-half or more of the statements listed below in 1, 2, and 3. Level 1: only 50 percent; Level 2: 65 percent, and Level 3: 80 percent.

1. The teacher

    a. has selected objectives that are consistent with an observed need of the learner;

    b. gives evidence that he knows something about individual pupil's life outside the classroom;

    c. re-phrases questions that are too difficult (adapts questions to individual difference or varies questions so as to enable pupils of different ability levels to participate);

    d. gives various individual assignments on different levels for different pupils;

    e. recommends various outside resources for different pupils;

    f. schedules extra help, special study, tutoring, or enrichment activities with individual pupils;

    g. provides more than 1 group learning activity;

    h. the teacher moves about the room, works with individual pupils at their desks or tables, or individual **pupils** come to the teacher's desk to work;

    i. makes comments and criticisms to an individual pupil about his own particular problems while other pupils pursue their own meaningful learning activities;

    j. returns student papers with personal notes giving constructive criticism.

2. The pupil (pupils)

    a. participates in learning activity;

    b. knows and understands short-term objectives;

    c. works on different self-scheduled tasks;

    d. moves about, asks for help, assists another student (is used as resource to help other pupils),

    e. uses a variety of supplemental materials, resources or texts;

f. changes the content or direction of the lesson as a result of his comments or suggestions clarifying the objective.

3. The teacher or pupil (pupils)

a. characterizes the lesson by wide and enthusiastic participation aimed toward achievement of pre-established objectives.[38]

B. Instructional Program Requirements

1. Elementary [Note: no allocation of time for the respective subjects is suggested in regulations]

a. Curriculum - (level 1) Arithmetic, Art, Health, Language Arts, Music, Physical Education, Safety, Science and Social Studies are taught at each grade 1-6 or identified educational level of students by the method, media or procedure consistent with the objectives of the school. At level 2, foreign language, industrial arts or both are taught as a part of the elementary curriculum.[39]

2. Junior High School [Note: no allocation of time for the respective subjects is suggested in the regulations]

a. Courses or subjects required of every student in grades 7-9 (level 1) - The courses or subjects specified below are required for each student. Schools which do not include all the grades 7, 8, and 9 shall mark this standard as it applies to the schools which the students are expected to attend for the completion of grades 7, 8, and 9.

(1) There shall be no substitution for the following requirements of every student:

Language Arts	3 school years or equivalent
Mathematics	2 school years or equivalent
Physical Education	3 school years or equivalent [equivalent is undefined in the regulations]

(The 2 years of physical education required in grades 7 and 8 for each student may be fulfilled by a minimum of 90 sessions per year with at least 2 sessions per week for the entire school year.)

Science	2 school years or equivalent
Social Studies	2 school years or equivalent
Art, Foreign Language, Humanities or Music	½ school year or equivalent
Agriculture Business Education, Home Economics, Industrial Arts or Work Experience	½ school year or equivalent

(2) Or the school may fulfill the course or subject requirements for a student in grades 7-9 on an individual student basis provided: [note - this alternate provides a means of deviating from the time and course requirements listed previously and presumably would provide adequate means to implement continuous progress plans.]

(a) The school develops a plan which includes guidelines and criteria for establishing the individual student's program of studies, the philosophy of the school, including the theory of learning on which this philosophy is based, and a procedure for evaluating the plan periodically.

(b) The plan implements the goals as established for schools.

(c) The original plan has been approved by the County Board of Pubic Instruction.

(d) The original plan has been approved by the State Superintendent of Public Instruction or his duly authorized representative (plan shall be submitted to State Superintendent at least 3 months prior to the anticipated date of implementation.)

(e) The evaluation of the plan shall be submitted to the County Board of Public Instruction and to the State Superintendent of Public Instruction or his duly authorized representative annually (or periodically as required by the State Superintendent or his duly authorized representative.)

(f) The County Board of Public Instruction or the State Superintendent of Public Instruction may withdraw their approval of **said** plan on the basis of the evaluation submitted or on the basis of information requested of the school or obtained through visitation.

(g) Any changes in the original plan, whether in interpretation or implementation, shall be approved by the County Board of Public Instruction and the State Superintendent of Public Instruction or his duly authorized representative.[40]

3. Senior High School [Note: contrasted with elementary or junior high school regulations, a time basis for credit is designated]

   a. Credits required - (level 1) A minimum of 15 credits earned in grades 10-12 is required for graduation.

   b. Time basis for credit - (level 1) The minimum scheduled time requirement for awarding a high school unit of credit is 250 minutes per week for 36 weeks; fractional credits may be given on a proportional basis.

   c. Credit courses - (level 1) Any subject or course approved by the county board of public instruction and meeting the aggregate time requirement for a school year is considered a one-credit course. Students enrolled in cooperative education may earn a maximum of 1 credit per year for approved work experience.

   d. Graduation time - (level 1) No student is permitted to graduate in less than 3 full years in grades 10-12 except as provided under Regualtion 130-5.911 as discussed previously under the section on the 12-month program.

   e. Courses or subjects required of every student for graduation from grades 10-12 - (level 1) The courses or subjects specified below are the minimum courses required for graduation. The school may exceed this minimum when their additional requirements are approved by the district board and on file with the accreditation section of the state department of education.

(1) There is no substitution for the following requirements for every student:

Language Arts	2 credits
Mathmetics	1 credit
Physical Education	1 credit, exclusive of health, first aid, and driver education
Science	1 credit
Social Studies	2 credits, unless 3 full years of social studies have been completed in grades 7-9, in which case only 1 credit is required

(1 credit in American History or American History and government and a unit (30 hours) in Americanism vs Communism in grades 11 or 12 as established by law are required for graduation.)[41]

(2) Or the school may fulfill the course or subject requirements for the graduation of a student from grades 10-12 on an individual student basis, provided: [same procedure as described under a(2) under instructional program requirements for junior high schools.]

C. Instructional Materials

Under provision of Chapter 233.13, the State of Florida is charged with the responsibility of furnishing all textbooks adopted for use in the public schools. The State Textbook Committee theoretically evaluates textbooks according to the criteria of "suitability, usability and desirability." According to an administrator of the state textbook program, durability is an additional criterion which receives considerable attention.

A feature of IPI is reliance upon unbound instructional materials. Chapter 233.50 of Florida Statutes provides for textbook related materials as follows:

> "There may be purchased from state textbook funds, text related instructional materials such as paperback books, unbound materials, consumable materials, slides, films, recording tapes, and other audiovisual materials; provided that such material is recommended by the courses of study committee or is purchased in connection with a pilot or experimental program approved by the state board, evaluated and

> recommended by the state textbook committee, and is contracted for by the state textbook purchasing board in the same manner as textbooks."

SUMMARY

Indications are that a county school system in Florida could implement an IPI program if it so preferred. A favorite pastime in many instances is for a local administrator to use an excuse such as "the State Department won't allow us to do that" when asked why a particular program is not being operated. One cannot generalize for the fifty state educational systems on the basis of the investigators' findings in Florida. However, it is likely that local school systems throughout the nation interested in the development of IPI will find ample statutory and regulatory permission for at least the pilot or experimental stage.

SECTION SIX:

Transfer Between School Systems

One of the most disruptive school experiences that a child can have is the transfer from one school to another during the school year. In most instances, there is a change of residence and the resulting loss of familiar surroundings and friends. The new school environment cannot be viewed by the child as part of a great and rewarding adventure. His schoolmates are different and the teachers are strange. Perhaps worst of all, the child has no status or place in the new social setting. This experience in itself is sufficiently unsettling to seriously interfere with the child's progress in his studies. When we add to this the lack of any continuity in the studies due to different teachers and teaching methods, different instructional materials, and different stages of progress in the subjects, it is not difficult to understand the confusion and frustration on the part of the child. IPI could provide a means for lessening the educational disruption in school transfers.

There appears to be no data for the Florida Public Schools on the number of students enrolling at the beginning of each school term who attended a different school the previous year, within or outside the state. We do know that during the 1966-67 school year 4.62 percent (63,155) of the enrollment entered the state schools from outside the state, and that 2.34 percent (31,959) of the enrollment had transferred between counties during the school year. The school changing rate within the counties is unknown. The data show that at least 7 percent (95,114) of the students were involved in a major change of school and community setting during the school year.[42]

At least a third of the transferring students in Florida are in a special category known as the "migratory child." These are the children of the migratory workers who "winter" in Florida between December and April during the citrus and tomato harvesting season. The migrant child typically enters the state after two months of school have elapsed, leaves before the school year ends, and often changes schools between counties at least once while in the state. The migrant child has an average of six months school enrollment each year, compared to nine months for the average child in Florida. It is not surprising, then, that 95 percent of the migrant children drop out of school between grades one and twelve, and that the usual age for dropping out of school is 11 as compared to age 16 or above for most other school drop-outs.[43]

The migratory child is a special and tragic case whose problems will not be solved by improving instructional methods in public schools. To put undue emphasis on these children in this report would tend to ignore the more than twice as many children who change schools but who are fortunate enough not to be in the same social and economic circumstances as the migratory child. However, the two groups form a sufficiently large number to warrant special attention.

IPI, as described in this report, would probably go far toward solving some of the special educational problems of students transferring between schools, particularly during the school year. First, a comprehensive and continuous testing program for measuring the level of mastery in various subjects would make it possible to place a student immediately in the proper sequence of study according to his level of achievement. Secondly, with individual rate of progress the student could take up his studies at any stage of progress with a minimum loss resulting from the transfer to a new school. Thirdly, the new social environment of the school, new classmates and teachers, would cause less disturbance than at present, as the student would not be required to perform in a classroom setting but would work on his own to a much greater extent than is now possible.

For students to transfer freely between schools with a minimum of interruption, it would be necessary for some conformity to exist between schools as regards tests, testing procedures, standards of performance and knowledge, and levels of attainment. This, of course, requires that in any particular subject the course objectives and achievement criteria be approximately the same whether the school is in Florida or Idaho. Such conformity would be difficult to achieve under any circumstances, but the formal requirements for IPI are such that standards could be established far easier than is possible under the present system where there are few recognizable standards outside the individual schools or classes.

SECTION SEVEN:

Conclusions

I. Social-Economic Implications of IPI

For purposes of analysis and ease of presentation, the three key features of a complete IPI approach--(a) continuous year-round school program, (b) differentiated staffing, (c) individual rate of progress --have been treated separately throughout this report. The conclusions which follow are based on IPI as an integrated system, incorporating all three features, and represent some of the possible impacts of such a system both in rural and urban communities on the six socio-economic areas investigated in this study.

A. Community Programs:

1. Rural area - Community programs for summer recreation and civic order would not be detrimentally affected. Summer recreation programs could easily be made part of the school recreation program. Civic order as related to school age youth is not a problem and would not be affected.

2. Urban area - Recreation programs could be made part of the school recreation program with accruing benefits for effectiveness of administration, fiscal planning and budgeting. Fewer youth would be idle during the summer, thereby reducing one source of civic disorder.

B. Family Group:

1. Rural area - Family vacationing would not be effected in rural areas such as the one studied, since the family income level for the majority of the population does not allow for any such activity. In the rural area studied, most working mothers worked during the summer months in the fields, and a change to IPI would not help them and could be a burden. In this particular county, very young children are normally taken to the fields where the mothers may watch them while they work, and older children are themselves at work. School in the summer, requiring the mother to prepare the child for school in the morning and be available when the child returns home, would seriously interfere with her work in the fields.

   In larger towns, mothers working as domestics or in clerical or catering activities would be helped if children were in school the year-round as it would ease the babysitting problem. Social welfare workers were of the opinion that if IPI permitted children to be out of school, parents might neglect to send them regularly and, therefore, they recommended retention of minimum attendance requirements.

2. Urban area - As IPI would permit greater flexibility in vacation planning, families could take their vacations whenever they wished, eliminating the necessity for concentrating vacations in the summer. Most of those interviewed doubted that there would be any change in the present pattern of vacationing, however, due to ingrained custom and the advantages of summer weather conditions.

   The area studied had a high proportion of women in the labor force, and many of them are married and have small children. IPI would remove some of the more serious summer child care problems for these women, and would permit these mothers to take the children from school when convenient. Social welfare workers feared that with such an arrangement some parents would tend never to remove their children from school, for any family activity. They also noted, however, that in most such instances the school environment might be more desirable socially than the home.

   In both rural and urban areas, welfare workers were concerned that if IPI were permissive to the extent that children could skip school when they wished, many parents would not send them to school regularly. This was thought most likely to effect those children already classified as "disadvantaged." Regulations requiring minimum school attendance were, therefore, considered necessary.

C. Industry and Business:

1. Rural area - In the area studied interviewees did not think that IPI would have a major impact either on vacation planning or on absenteeism in industry and business. This attitude resulted at least partly from the fact that the major rural economic activity, agriculture, and much of the related industry is seasonal and discontinuous in nature. Vacationing had low priority, if any, in the considerations of the workers. However, IPI would interfere with the summer manpower requirements of agriculture, as shown under Labor Force, below.

2. Urban area - Urban areas do not generally have marked seasonal demands for labor, as agriculture does, and IPI would not be detrimental to the urban economy. It could even have the advantage of reducing the need to provide special summer jobs for students as shown below under Labor Force.

   IPI could increase flexibility in scheduling family vacations, and would thereby ease production scheduling in urban industry.

D. Tourist Trade:

1. Rural area - IPI in rural areas such as the one studied would have no effect on the tourist trade, as there was no tourist trade in the area itself, and the majority of the population, for economic reasons, did not take vacations of the type that would influence the tourist trade elsewhere.

2. Urban area - If the opinion of those interviewed is correct, and vacation patterns cannot be changed, IPI in urban areas would not effect the tourist trade. The investigators were not completely convinced of this, however, as the growing affluence of our society is already changing vacation patterns to some extent, as evidenced by the growing number of winter resorts and by vacations in the tropics. If IPI permitted a wider choice of family vacation times, patterns might change even more rapidly.

E. Labor Force:

1. Rural area - In rural areas of the type studied, IPI would have a detrimental effect on the economy by substantially reducing the supply of cheap child and juvenile labor necessary for seasonal agricultural work. Such a reduction in the seasonal farm labor supply, of course, could have economic repercussions reaching far beyond the local situation. The investigators concluded that the present rural economy of such areas as the one studied will not permit the adoption of IPI on a continuous twelve-month basis.

2. Urban area - The three most probable direct effects of IPI on the labor force are the following:

   a. Enrolled students and graduating students would enter the labor market throughout the year rather than primarily during the summer months. Since enrolled students could, and most probably would enter the labor market in response to the availability of employment, the unemployment rate for school age youth would be reduced substantially.

b. The transition from school to work would be smoothed through better vocational education and school-and-work programs which IPI makes possible. Also, since vocational education using the IPI approach could provide for highly specialized training and actual work experience, students could enter full-time employment with a more adequate immediate earning capacity. Such programs also increase the danger, however, of over-specialization which might reduce the worker's capacity to adapt to changes in technology or in the economy.

c. Under IPI, the greater resources of the urban areas as compared to the rural areas, the greater opportunity of acquiring varied work experience, and the greater likelihood of a year-round school program in the urban area might serve to increase the difficulties of rural youth in competing with urban youth in a primarily urban economy.

F. Education:

1. Rural and urban areas - Larger expenditures would be required for IPI. A full staff of teachers would be required year-round. More substitute teachers would also be required--not only because of the extended school year but to provide vacation and training time for the full-time teachers.

An intensive in-service training program would be required initially for most present teachers, substitute teachers, and aides, in order to develop the skills and techniques necessary for IPI. To adapt teacher training programs to an IPI approach would require considerable changes in the colleges and universities, especially in schools of education. Such changes will be met with considerable resistance.

A basic assumption of this study is that IPI as described is superior to traditional instructional systems, and that its adoption would raise the general level of educational attainment. However, unless IPI were instituted throughout the society, which would necessitate drastic revision of the present system of school financing and provisions for change, the effect might be to increase to an intolerable level the existing disparity between students from advantaged and disadvantaged, suburban and slum, urban and rural backgrounds. Under present circumstances, the schools most likely to see the advantages and meet the costs of IPI's adoption are precisely those which are already in an advantageous situation. With IPI, as with traditional programs, students who are encouraged at home, who do not have to work, and whose parents actively support their education will have an advantage. And, perhaps, in a system such as IPI, where individual initiative and self-motivation yield such definite advantages, students from such backgrounds may have even greater advantages over the less fortunate than they do at present. The social effects of increasing such disparity are obvious.

The two calendar years saved by IPI in completing the traditional requirements for high school graduation would require that far-reaching decisions be made on how the two years should be utilized, or whether students should be permitted to leave school at an earlier age. The tendency at present is to teach more advanced courses rather than to add more subjects at the existing levels of difficulty. If students were able to do the work at an earlier age, and if the present instructional sequence were maintained, approximately the first two years of college work could be included in twelve calendar years in the public schools. This would remove the present pressure on college and university facilities and budgets, which would, in itself, go far toward covering the cost of adopting IPI in the public schools. However, college programs would require radical changes to meet this situation.

II. Some Difficulties to be Encountered in Introducing IPI

A. Public Concern - Any educational program which has been tagged as "innovative," "progressive," "permissive," "radical," etc. will be received with considerable apprehension and may meet with strong resistance.

B. Wide Public Support - Public support is required in order to successfully introduce IPI into school systems. This support is not present in most communities because of: (a) concern about the possible adverse effects for quality education; (b) apathy due to ignorance of present educational problems and needs; (c) probable increases in the cost of education for such a program; (d) community groupings into poor areas with poor schools and affluent areas with well-endowed schools. Those in the affluent areas are unwilling to give added support to the poor areas through taxation.

C. Educators - If the professional educators do not inform the public about the needs and problems of education, there is little likelihood that the public will become better informed. Yet, with rare exception, the education profession is a very conservative one; there is a vested interest in teaching along conventional lines. A major change requires an exceptional effort on the part of educators, an effort not necessarily forthcoming simply in the name of better education. The county superintendents, many of whom are elected directly by the public, are the last ones to stick their necks out in support of any doubtful changes in their own school systems. The individual teacher at present is over-burdened with work and uninterested in getting involved with new teaching techniques. Many also feel, in many cases rightly so, that any radical changes in the methods of instruction are likely to leave them by the wayside or threaten their jobs. Under these conditions, one cannot expect a great deal of enthusiasm on the part of the educators to convince the public of the need for major innovations on a wide scale in school systems.

D. Individual Teachers - One of the major problems in introducing a program of IPI into a school system is that of finding competent instructors. The biggest concern of those developing IPI is the difficulty of finding instructors suitable for such a program. One hope of those promoting IPI has been that standardization of instructional material through IPI would upgrade the level of instruction in spite of the quality of the instructors involved. However, as one person working in IPI put it, "the svstem may be good, but the system will not determine the quality of the education because the teachers will defeat the system."

E. Instructional Materials and Programs - Some courses in some subjects have been developed on the concepts of IPI, and the materials required for these courses have been prepared. These materials are in the form of written material, recordings, films, etc. Most of these are still in an experimental development stage, however, and there are no mass supplies of IPI materials now available for most courses. The result is that individual teachers wishing to teach with IPI methods must produce most of their own materials for instruction. This of course puts severe limitations on the possibilitv of any widespread adoption of IPI in the immediate future.

F. State Laws and Regulations - Although the standard hardback text-book used in public schools will to some extent continue to be used under IPI, it is not suitable in its form for the major part of the instructional program, since it is not sufficiently flexible for the demands of IPI. IPI requires the use of large quantities of loose, unbound material for purposes of instruction. Much of this material would be consumed in the process of being used, unlike a text-book which remains intact. This can raise a major problem in some states. For example, in the State of Florida, approximately 90% of the costs of instructional materials come from state financing, and the state law referring to instructional materials deals almost exclusively with text-books. State textbook committees choose all text-books on the basis of instructional quality and their durability, since textbooks are adopted for a five-year period. In each subject area five books are selected; no other books can be used in place of the text-books chosen by the state. The adoption of IPI, therefore, would require a change in the state law dealing with instructional materials.

FOOTNOTES

1. John O. Bolvin, "Implications of the Individualization of Instruction for Curriculum and Instructional Design," Audio Visual Instruction, 13, March 1968, pp. 238-242.

2. Clarence A. Schoenfield and Neil Schmitz, Year-Round Education (Madison, Wis.) Dunbar Educational Research Services, Inc., 1946, p. 9.

3. Ibid., p. 11.

4. The continuous year-round school, as already noted, is not the same as an "extended" school year or "staggered" program which only utilizes the extra months up to 12. The "extended" or "staggered" programs neither require nor facilitate individual progress as arbitrary time periods are still imposed.

5. Assumes that school year will not be terminal and that there will be no terminal grades K-12 as at present. The added two months each year can be utilized for continued progress - accumulative equivalent of two traditional school years. It is assumed that approximately one month will be taken up in the form of vacations and similar breaks during the year.

6. Once the instructional program has been individualized the school program can become continuous and, as desirable, year-round.

7. Temple City Unified School District, A Preliminary Proposal for the Implementation of a Differentiated Teaching Staff in the Temple City Unified School District, Temple City, California, submitted to the Charles F. Kettering Foundation, January, 1968, p. 12.

8. Ibid., p. 17.

9. Of all school lunches in Gadsden County, 45.1 percent were served free or at reduced price in 1965-66 according to Research Report 54, Division of Research, State Department of Education, July, 1967, p. 53.

10. Pay is on a flat rate basis by the hour. A piece rate basis of payment was tried, but so much damage was caused to the delicate tobacco leaves that the farmers reverted back to the flat rate basis.

11. The State of Florida, under its state constitution, has the power to take over and run any school system if considered necessary. Practically speaking, such an action is almost inconceivable.

12. Florida State Board of Education, Regulation 130-1.52 (4).

13. Op. cit., A Preliminary Proposal for the Implementation of a Differentiated Teaching Staff in the Temple City Unified School District, Temple City, California.

14. State Department of Education, Ranking of the Counties...1967, Research Report, Division of Research, Tallahassee, Florida, p. 45.

15. U. S. Department of Labor, Manpower Report of the President, transmitted to the Congress April, 1968, U. S. Government Printing Office, Washington, D. C., pp. 121-122.

16. Ibid., p. 123.

17. Explanations of calculations used in Tables I and II are given in the appendix, pp. 91.

18. U. S. Department of Labor, Bureau of Labor Statistics, Teenage Employment Needs, Summer, 1968.

19. Although enrolled full-time in school, a student who registers for employment with the Employment Service is counted as unemployed until he finds employment or the registration expires. In the Household Manpower Survey a student is counted unemployed if it is claimed that he is seeking employment and is not working.

20. Op. cit., Manpower Report, pp. 253-254.

21. Calculation of proportions of enrolled and non-enrolled in the labor force is as follows:

    The proportions of enrolled to non-enrolled for the nine winter months is assumed to be the same as for the month of October, determined from data of the Manpower Household Survey. These proportions are 49 percent enrolled and 51 percent not enrolled.

    This 51 percent of the nine month average monthly size of the labor force of 5,363,000 is 2,628,000. Assuming this number to be relatively fixed throughout the year, the increase in the summer labor force is attributable to enrolled workers. Taking the average monthly summer labor force of 7,518,000 and subtracting 2,628,000 we obtain 4,783,000 which is 63 percent of 7,518,000.

22. Op. cit., Manpower Report, p. 116.

23. Ibid., p. 121.

24. Ibid., p. 122-123.

25. Florida State Department of Education, *Report on Strategies for Curriculum Change*, Tallahassee, 1968, p. 72.

26. State Department of Education, *Accreditation Standards for Florida Schools* (1968-69, Proposed). Tallahassee, 1968, pp. 40-41.

27. *Florida Statutes*, Chapter 232.01.

28. *Ibid*., Chapter 236.02.

29. *Ibid*., Chapter 236.04.

30. *Ibid*., Chapter 228.04.

31. *Op*. *cit*., *Accreditation Standards*, Regulation 130-5.911, p. 251.

32. *Ibid*., p. 23.

33. Florida State Department of Education, *Florida's Education Program*, Tallahassee, 1968, p. 46.

34. *Op*. *cit*., *Accreditation Standards*, p. 23.

35. *Florida Statutes*, Chapter 236.07.

36. Florida Educational Research and Development Council, *Year-Round Schools for Polk County, Florida*. Gainesville, Florida, 1966, pp. 37-38.

37. *Op*. *cit*., *Accreditation Standards*, p. 60.

38. *Ibid*., pp. 115-116.

39. *Ibid*., pp. 110-111.

40. *Ibid*., pp. 174-175.

41. *Ibid*., pp. 253-254.

42. State Department of Education, Division of Research, *Research Brief 26*, December, 1967, Tallahassee, Florida.

43. John E. Kleinert, (Project Director), *A Summary of the Preliminary Report of the Florida Migratory Child Survey Project*, prepared for the Florida State Department of Education by the Florida Migratory Child Survey Center of the University of Miami, 1968, pp. 30-32.

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APPENDIX

Explanation of Calculations

1. Indexes of employment status in Table I are calculated as follows: The labor force, for example, is the arithmetic mean of the twelve-month data (5,902,000) and is taken as 100. Accordingly, the index of the civilian labor force for January, for example, is (49,030,000/59,020,000 x 100 = 83.1).

2. Indexes in Table II are calculated in the following way:

   a. On the basis of the number in the civilian labor force and unemployment, the monthly unemployment rates are obtained. The mean of the twelve monthly unemployment rates is set at 100 to derive the monthly index of unemployment rate (^{U}1).

   b. The civilian labor force is assumed to be equally distributed at 5,902,000. The number of employed is the one given in Table I. From this labor force and employment, the number of unemployed persons and the monthly indexes of unemployment rates (^{U}2) are calculated.

   c. The labor force, which is assumed to be distributed in proportion to the distribution of employment, is derived as follows: The arithmetic mean of the monthly employed persons is obtained. The ratios of monthly employment to the mean are then derived as follows:

	Jan.	Feb.	March	Apr.	May	June
Ratio	0.83	0.84	0.85	0.89	0.92	1.14
	July	Aug.	Sept.	Oct.	Nov.	Dec.
Ratio	1.33	1.30	0.97	0.98	0.96	0.98

These ratios are multiplied by the mean of the civilian labor force in Table I to obtain the labor force proportional to the distribution of employment. The monthly employment is subtracted from this imaginary monthly labor force to get the number of unemployed persons and the indexes of unemployment rates are calculated.